JUNE, MDCCCLXII.

THE ZOOLOGIST:

A

POPULAR MONTHLY MAGAZINE

OF

NATURAL HISTORY,

AND

JOURNAL FOR RECORDING FACTS AND ANECDOTES

RELATING TO

QUADRUPEDS, BIRDS, REPTILES, FISHES, MOLLUSKS,
INSECTS, WORMS, ZOOPHYTES, &c.

THEIR HABITS, FOOD, RETREATS, OCCASIONAL APPEARANCE,
MIGRATIONS, NESTS AND YOUNG.

No. CCXLIII.

LONDON:
JOHN VAN VOORST, PATERNOSTER ROW.

Price ONE SHILLING.

Concerning a Dormouse.—On the 3rd of January, when in search of ferns, a lad who accompanied me, seeing a nest on the ground picked it up; it proved to be that of a dormouse, probably taken from a neighbouring thicket by boys, and thrown away under the impression of its being an old bird's nest; but the mouse apparently had been undisturbed by the rough handling, though the nest was in a disordered and ragged state. When brought into the house it was placed in a common bird-cage, being still in a deep slumber, but on removal to a warm room it soon began to stir itself, springing about the cage in the most agile manner, running up the wires with the greatest ease imaginable. When handled it made no attempt to resent the liberty. After perambulating the cage for awhile with a view to escape it became reconciled to its prison-house, settling quietly down, and ere long relapsing into its usual state of torpidity. It was fat and sleek, notwithstanding its long fast. On the 4th of March I carried it to have its photographic likeness taken. Though a frosty day—shortly after removal from the box compartment of its new cage—I perceived that it had slightly uncoiled itself, though held in a cold hand, and on reaching the photographer's I found that it had so far relaxed as to have assumed a semicircular form, not unlike the sign of the "Golden Fleece," and as inanimate too, and, its eyes being closed, a partial observer would have pronounced it dead, but it breathed nevertheless, and might, by an attentive ear, be heard to emit a faint and plaintive note, rather than a squeak or snore. Possibly the warmth of hand or room may have led the mouse to dream of verdant spring, hazel woods and absent mate. Though not weighed, I feel confident that it has fallen off in condition during the two months it has been in confinement; not that it could have fed had it been at liberty, seeing that it has been in a constant state of torpor. Shelled nuts and other food were provided for it, but nothing having been touched there is reason to doubt whether it feeds at all during the winter months, notwithstanding all that has been advanced to the contrary. For instance, Macgillivray says, "And rolling itself into a ball it falls into a state of torpidity, from which it is now and then aroused by an unusually mild day, when it partakes of its provision." If such be its habit, why are we not informed how and where it stores its food? When and by whom observed quitting its nest for the purpose of feeding? Mr. Salmon (quoted by the above author) states, "that it experienced no difficulty in either ascending or descending the polished backs of the chairs." But unless the backs of the chairs were greatly inclined, I do not see how a footing could be obtained, but as he says that "on being set at liberty it sprang at least two yards on to a table," I conclude that it ascended and descended the backs of the chairs in a similar manner. Up to this time (30th of March), the mouse had been in a profound sleep, but before daylight it left its box and entered the cage, the rotatory motion of which was heard for some time. It has eaten some barley and bread crumbs during the day, and all its natural functions are restored. March 31. In the morning it was found sleeping, partly coiled up, head downwards. It has been very sluggish both yesterday and to day, but its sense of hearing is very acute, raising its head at the slightest noise or whistle, and peering up at one with its large and prominent black eyes. April 1. At 9 A. M. found that the little animal had worked its way into the centre of a mass of cotton wool, so as to be completely concealed. At half-past 3 o'clock it was still sleeping, but on the cotton being moved it awoke, shook itself and resumed its nap. 2nd. At half-past 8 A. M. found the mouse snugly ensconced amid the cotton, looking like a ball, except that the head protruded somewhat; it was awake, however, and appeared to be eyeing me. At 10 P. M. it was sleeping on its side, partly rolled up. 3rd. At 8 A. M. on removing the cotton covering, it appeared to be in a deep sleep, and at 2 P. M. was still sleeping; towards night it awoke, but did not stir. 4th. At 9 A. M. it was sleeping as before, and at 3 P. M., finding that it had neither moved nor touched its food, and thinking it might be ailing, I took it into my hand; it was stiff and cold and apparently dead, but on removal to a warm room—where it was also exposed to the sun—it gradually revived, but on attempting to run it went spinning round, owing possibly to its having one eye closed. It seemed stupified, however, knocking itself against the wall, window, &c., rejecting nuts and other kinds of food. 5th. At half-past 7 A. M. was still alive, but in a very weakly state; on being taken to the fire it recovered a little, but took no food till it had slaked its thirst; it drank long and deeply, and in the course of an hour or two it began to feed, taking up part of a nut in its fore paws like a squirrel. 6th. At 9 A. M., as usual of a morning, it seems chilled and cramped: one eye is partially closed, and it is evidently suffering from a cold or chill, but it has fed well during the day. 7th. It is much improved, and has consumed several nuts. 8th. It is lively and well, both eyes clear and bright. Though held in the hand for some time, while being examined and measured, it did not attempt to bite. 9th. At half-past 12 A. M. found it running about the cage. I had previously observed that it was more lively and inclined to feed at night, and think it may, like the common mouse, be nocturnal in its habits. Its full and prominent eye seems formed for catching every ray of light. Though restored to health it is still sluggish, sleeping the greater part of the day. On the 29th of March, its having been removed from an empty room to a sleeping apartment may possibly have caused it to wake up somewhat earlier than it otherwise would have done. A slight description may not be unacceptable. Sex, female. The back is yellowish brown, with a grayish tinge, it being covered with long black hairs, interspersed with white. Between the ears there is a darker shade, defining the forehead, which, as well as the cheeks and ears, is of a bright reddish brown. The mystachial bristles black. The centre line of the back and upper part of the tail are a shade or two darker than the rest; under part of tail of a yellowish gray. Chin light yellowish brown. Neck and breast of a pure white. The rest of the under parts reddish brown, but lighter towards the sides. Forehead bowed. Nose pointed, and of a flesh-colour. Ears rounded and very open. Eyes large, black, prominent, obliquely set. Legs short, flat and very muscular, of a reddish flesh-colour; paws large; toes very long, except the thumb, which is rudimentary, and nailless. Total length, 5$\frac{8}{10}$ inches; length of tail, hair included, 2$\frac{8}{10}$; width of tail, $\frac{3}{10}$; head, 1; ear, $\frac{3}{10}$; mystachial bristles, 1$\frac{2}{10}$; longest toe, $\frac{3}{10}$; hind paw to end of claw, $\frac{11}{20}$, and $\frac{3}{10}$ in width; to first joint of leg, $\frac{7}{20}$, and $\frac{5}{20}$ in width. Its invariable position, except when in action, is a sitting one, with the back much curved, and the tail brought round the body. Though timid it never attempts to escape.—*Henry Hadfield; Ventnor, Isle of Wight, April* 9, 1862.

Early Arrival of Migratory Birds.—The mild weather which has prevailed during the greater part of the month of March seems to have had its influence on the movement of the migratory birds, if we may judge from the following dates observed at and near Bembridge. March 7. Wheatear; a single bird on the shore. March 18. Chiffchaff; numerous. Also a fresh flight of wheatears and many titlarks on the shore. 18th. Swallow; one seen at Sandown. 28th. Wryneck; several times heard. 29th.

Redstart; a single male seen. Wheatears and chiff-chaffs numerous. 31st. Sand-martin; one off Bembridge Harbour. Though most of these have at different times been noticed in March, I believe the occurrence, at this early date, of no less than six of the summer birds of passage in one locality is very remarkable.—*A. G. More; Bembridge, Isle of Wight, April*, 1862.

Protection of Small Birds.— In the same way that it is found necessary by law to protect the workers in mines against their own folly and carelessness, by rendering the use of an unguarded light an indictable offence, it is no less important, at the present time, that some steps should be taken to stay the cruel and suicidal practice of many agriculturists of destroying indiscriminately our small birds, by means of poisoned wheat. Had we not the express warning before our eyes of the inevitable result of such a system, in the frightful ravages of insect life on the Continent, to abate which, at the present time, the most stringent laws are now being enforced to stay the slaughter of the "farmers' friends," the slightest reflection must convince any one, capable of reasoning power, that the wholesale destruction of one class of God's creatures, purposely designed by their Maker to fill an appointed place in the order of Nature, must destroy that wonderful balance observable in the animal kingdom, by which the necessities of each particular class are made available to keep down the excess of others. The hawks and the owls prey on the surplus of the feathered tribe and the smaller vermin that infest our homesteads, and but for the almost total annihilation of the former by keepers, on account of the game, the large flocks of finches and other small birds would be thinned in a far more natural and legitimate way than by the arsenic and strychnine of the secret poisoner. To the small birds also, in their turn, is assigned the task of keeping down the teeming myriads of insect life which threaten, but for such intervention, to render the land a barren waste; and though man only too effectively can devise the means of exterminating the feathered tribes, where will he find a substitute for those little microscopic eyes that pry into every bud and plant and crevice, and pick up millions of little atoms from the soil, too small for human vision, yet terrible in their numbers. If, then, their allotted work throughout the universe is one of such immense importance, may we not consider them entitled, in return, to some portion of that grain they, and they only, have preserved to our use. We admit it is often a vexatious sight for the farmer to see the long rows of empty ears skirting the fences of his wheat and barley fields; but if the hawks are not with us to do their work, the gun, the snare, the net and the clappers will at least avail as much as they ever did before the reckless system now in vogue caused wholesale massacres in every county. The 'Stamford Mercury' states that at Spalding and Holbeach men have appeared on market days "with hundreds of linnets, finches, sparrows, and other small birds (which they have poisoned) strung round them like beads, as trophies and an advertisement of their odious calling." The editor of the 'Cambridge Independent' also says:—"We saw on Thursday morning a labourer in Chesterton fields throwing poisoned wheat broadcast around the hedges and trees," and that "one chemist alone in Cambridge prepares two bushels per week of wheat mixed with strychnine for the destruction of the harmless and beautiful feathered tribe." Hitherto the poisoning has been apparently confined to the autumn and winter months, when old and young birds frequent the growing corn, or seek subsistence during frost and snow from the stores of grain in barns and stack-yards. Now, however, it is continued during the spring, with no doubt the stupid and short-sighted notion of destroying the old birds before breeding commences. Have these wiseacres never reflected that all our resident grain-eating birds are insect-eaters too, and that a large proportion of them subsist on insect food alone as long as they can obtain it? and when, we would ask, is insect life so destructive as in spring and summer, when our fruit trees are blossoming and the grain is young? No sooner is the warmth of the sun felt, after months of dreary winter, than the land teems with insect forms innumerable, which threaten, unchecked, to destroy all vegetation; but soon an all-wise Providence supplies the needed antidote, in the gaping mouths of hundreds of unfledged nestlings waiting the return of their untiring parents. The tender stomachs of these little creatures admit of no less digestible food than insects, grubs and caterpillars, and these, in numbers far beyond the powers of calculation, relieve their wants and save the farmers from inevitable ruin. We are sorry to own that this abominable practice is only too common in our own county; and whilst we feel it our duty thus to call attention to the subject, we trust that those in authority, who are capable of judging of the inevitable result, will bestir themselves to compel the ignorant and the thoughtless to desist from the perpetration of an undoubted crime.—*Norfolk Chronicle, May* 5, 1862.

Birds killed by flying against a Clock.—I have to record a circumstance in connexion with the migration of birds which, I believe, is not common in this locality. On Saturday morning, the 26th of April, a youth of the name of Rutter resorted to St. Mary's Church, Devizes, to ring the six o'clock bell, and on arriving at the building he discovered at the base of the tower from twenty to thirty small birds lying on the ground quite dead. The plumage of all of them was in fine condition, but some of the bills and heads were much damaged, apparently occasioned by a blow. Birds of passage usually travel at night, and in the present instance it may fairly be assumed that these little creatures were making their journey toward some favourite spot selected for their summer residence (for birds return every year to their former haunts), but coming in view of the illuminated clock on St. Mary's tower, they may have dashed against it with such force that they fell to the ground and were killed by the concussion. Several instances are recorded in ornithological works of birds coming to this country having dashed themselves against light-houses and other buildings on the sea-coast, but I never remember to have seen an account of birds having done so in inland towns, and I am unable to account for their having done so in the present instance, except from the extreme darkness of the night, or probably they hoped to escape a very heavy hail storm which occurred, which might have happened at the time of their arrival in Devizes. I have been favoured with a sight of three of the species so found, for which I am indebted to Mr. James Randle, builder: these were the reed warbler (*Sylvia arundinacea*), the grasshopper warbler (*S. locustella*) and the wryneck (*Yunx torquilla*); some numbers of the latter species had been seen in Wiltshire, where they are known as "the cuckoo's mate," nearly a fortnight. I regret to find that the lad Rutter set no value on the birds, and that he gave about twenty of them to the cat: I am informed that several of these differed considerably from those above named, and no doubt were of different species. Mr. Grant, of this town, intends to preserve the four birds which have been saved from the jaws of the voracious cat.—*John James Fox; Devizes, May* 8, 1862.

The Nightingale's Nest.

By the Rev. ALFRED CHARLES SMITH, M.A.

THERE is a tradesman living in this neighbourhood who is extremely well acquainted with the habits and notes of the whole family of warblers, and professes to have so accurate an ear as to distinguish the several species readily by their voices when they are hidden from his sight, but has devoted more attention to the nightingale than to any other of our British songsters, and has been more successful many consecutive years in rearing the young of that bird from the nest, and, by means of very carefully and judiciously prepared food (concocted of a variety of materials, which, when pounded together are meant to resemble, as nearly as possible, in all essential particulars, artificial caterpillars), has been enabled to preserve his melodious pets in full health and song throughout the winter.

I mention these particulars in order to show that he is no tyro in the art, nor a superficial observer likely to be deceived; indeed his manner in relating the following incident proved him to my satisfaction to be extremely cautious in coming to a conclusion, painstaking, accurate and business-like in satisfying himself on the point he was investigating, qualities of superlative value in the enquiring naturalist.

The circumstance which he described to me, and which I consider so remarkable as to be worthy of notice in the 'Zoologist,' is the discovery, on two occasions, of a strong thorn projecting upwards in the centre of the nightingale's nest, than which one can scarcely imagine a more uncomfortable and inconvenient intruder, and the object of which is extremely difficult to fathom. The one nest was at the bottom of a thorn bush, not upon the ground, but within six or eight inches of it, profusely garnished with beech leaves, and from the very centre a large and sharp thorn protruded through the bottom of the nest: when discovered it contained four newly-hatched young, which my informant subsequently reared, and which he describes as lying on either side of the thorn. The other nest was placed in the middle of a thick bush, not a thorn, but of what species he did not recollect, about three feet from the ground: it was a large nest, of somewhat loose workmanship, and, in like manner, a long thorn, or rather, in this instance, pointed stake, issued through the nest, projecting upwards above the top. In both cases there could be no mistake about the matter, for each nest was easily examined, tolerably neat and tidy, and the presence of the intruding thorn clearly not a matter of accident, but design. What then can have been the motive in the builders of the nest in introducing so awkward a central pillar? Could it be (when the nest was not placed on the ground, as I believe is the more ordinary custom of the bird) in order to strengthen and consolidate so fragile a cradle, as a mast, to which the fibres should be tied? Yet no other bird, as far as I know, finds such support needful, or is in the habit of adopting so clumsy a device.

I at once sought for an explanation of this singular fancy in the pages of Hewitson, Yarrell, Selby, Bewick, and other standard works which I have at hand on the nesting of birds, but I do not find the projecting thorn alluded to by any of them; and yet, on farther investigation, the fact elicited by the observation of my informant, had been (though totally unknown to him) recorded by some of our poets from the sixteenth century. Thus I find Shakspeare, with that wonderful accuracy with which he delineates every subject he handles, and not the least so when he touches on Natural History, singing in the sonnet of the "Passionate Pilgrim,"

"Every thing did banish moan,
Save the nightingale alone;
She, poor, bird, as all forlorn,
Lean'd her breast up-till a thorn,
And there sung the dolefull'st ditty,
That to hear it was great pity."

And, again, in the "Poem of Lucrece,"

"And whiles against a thorn thou bear'st thy part
To keep thy sharp woes waking."

Again, Giles Fletcher, who wrote in the early part of the seventeenth century, says:—

"Tell me, sad Philomel, that yonder sit'st,
Piping thy songs unto the dancing twig,
And to the water-fall thy music fit'st.
So let the friendly prickle never dig
Thy watchful breast, with wound or small or big,
Whereon thou leanst."

And again,

"The bird forlorn
That singeth with her breast against a thorn.

And Pomfret, A. D. 1667—1703,

"The finest music of the grove we owe
To mourning Philomel's harmonious woe;
And, while her griefs in charming notes express'd,
A thorny bramble pricks her tender breast.
In warbling melody she spends the night,
And moves at once compassion and delight."

And Hood, in the same strain,

"Come let us set our careful breasts
Like Philomel, against a thorn,
To aggravate the inward grief
That makes her accents so forlorn."

Thus it was evidently believed by the poets, whether such an idea was founded on fact or not, that the nightingale leaned her breast on a thorn when she poured forth her mournful song. Now, I ask, what was the origin of such a supposition? Surely not a mere poetic fancy without foundation, such as the romance of the melodious accents of the dying swan. But I conceive that the finding a thorn projecting from the nest after the manner described above, if it be occasionally found in the nest of the nightingale, as in the two instances I have given, would furnish ample ground for such poetic embellishment.

But if this be so, still the original difficulty remains unexplained, namely, *Cui bono?* the why and wherefore of the thorn; and the enigma, scarcely more easy of solution, how does the sitting bird contrive to cover her eggs or callow young, with a stout and pointed thorn occupying the very centre of the nursery, an insuperable bar, as one would have conjectured, to all domestic convenience and comfort? These are questions which I should much like to see answered, and on which I earnestly entreat the opinion of those versed in nightingales and nightingales' nests.

Other details respecting these birds, communicated from the same source, and those, too, very reliable, as resulting from close personal observation, are, that in Wiltshire at any rate they are considerably on the increase, and that notwithstanding the raid made on them by my informant and two friends, who in one day a few years back, and on one estate, took no less than fourteen birds, the greater part of which were tamed and kept in cages through the winter. The same observer has also satisfied himself that there are two distinct species of nightingales, which he describes as the darker and the redder sort, and which he states vary from one another, not only in colour, in size and in note, but also in locality, the one almost invariably frequenting hedgerows, the other as generally the corners of woods. It must not, however, be inferred that either of these could by any means be the greater or true "thrush nightingale" of the Continent (*Motacilla philomela*, Gmel.), the "sprosser" of the Germans.

ALFRED CHARLES SMITH.

Yatesbury Rectory, Calne,
May 5, 1862.

Occurrence of the Golden Oriole in Essex.—A fine male specimen of the golden oriole (*Oriolus galbula*), in fresh breeding plumage, was shot last week at Tiptree, near this place. The specimen, which I saw in the flesh, was sent to Mr. Cator, of this town, to be preserved. There is no doubt, I think, but that this bird was after breeding. I hope the female will meet with a better fate than her mate.—*C. R. Bree; Colchester, May* 16, 1862.

Occurrence of the Black Redstart at Southampton.—A specimen of the black redstart (*Sylvia tithys*) was shot at Sholing Common, near Southampton, on the 20th of March last, by a young man named George Ward: he is an invalid, and was sitting by the door of the house where he and his parents live, when the bird flew round the corner of the house and settled on the ground; he went in directly and brought out a gun and shot it. It was stuffed by Mr. Taylor, of the Strand, and may now be seen, by any gentleman who is desirous of doing so, at 97, High Street, Southampton. Sholing Common is an extensive place, dotted here and there with houses and with pieces of broken-up land. The hawfinch and the crossbill have been rather numerous in this neighbourhood lately. One day a man brought ten or twelve of the crossbill to Mr. Taylor; they were tied by the neck, and looked something like a bunch of carrots dangling from the man's hand by a string: they were offered for sale, but were so much injured that no bargain could be made.—*J. Goatley; 97, High Street, Southampton.*

Occurrence of the Lapland Bunting in Norfolk.—A fine male of this rare and handsome bunting was netted near Norwich about two months since. The bird-catcher, unaware of its specific rarity, sold it soon afterwards, as a variety of the black-headed bunting, to the Rev. E. J. Bell, of Crostwich. In that gentleman's aviary the bird soon began to exhibit some of the peculiar markings of its breeding plumage, and a reference to Yarrell's plate and description identified it at once as Emberiza lapponica and not E. schœniclus. I know of but one previous instance of the Lapland bunting having been met with in Norfolk: a male, also netted near this city, in June, 1855, as noticed at the time in the 'Zoologist' (Zool. 4631).—*H. Stevenson; Norwich, April* 21, 1862.

Occurrence of the Parrot Crossbill near Colchester.—Three specimens of the above so-called species of crossbill (*Loxia pityopsittacus*) were brought to me in the flesh on the 21st of February last. They were one male and two females, and were killed on the Lexden or London road, just south of this town. As there is a good deal of interest attached to the natural history of the crossbill, and more particularly as to the specific difference of the common and parrot, I will, with your permission, give a description of the birds captured at Colchester, with one or two remarks. The male bird (all the measurements were taken in the flesh) was of the following dimensions:—

Length, $7\frac{1}{2}$ inches; carpus to tip, 4 inches; tarsus, $\frac{3}{4}$ inch; beak from rictus, $\frac{3}{4}$ inch; circumference of beak at base, 2 inches. One of the females differed from this measurement only in having the beak about a line less; the other was altogether smaller:—Length, 7 inches; carpus to tip, $3\frac{8}{10}$ inches; tarsus, $\frac{3}{4}$ inch; beak, $\frac{3}{4}$ inch; circumference of beak, $1\frac{8}{10}$ inch. In plumage the male bird was, on the top of the head and cheeks, middle of back, chest, abdomen and flanks, of a mottled brick-red and green, the former predominating; rump and upper tail-coverts bright vermilion-red, tinged with yellow; sides of throat-scapularies and upper wing-coverts dirty green; primaries and tail brown-black; under tail-coverts gray; feet dull brown; tarsi lighter; beak horn-colour; the lower mandible lightest. The female had those parts which were mottled with brick-red in the male, green; rump and upper tail-coverts bright yellow; throat and under tail-coverts gray; primaries and tail black-brown. No other differences. Their crops contained the seeds of what I believe to be the Scotch fir: I enclose some for your opinion. I have heard of one other specimen having been shot, which, from its size, I should infer was this species; and I have seen a male of the common crossbill which was entirely dark brick-red, which was shot in February near Walton-on-the-Naze. There is no difficulty in distinguishing the parrot crossbill, by its greater size and by the marked difference in the thickness and breadth and general parrot-like appearance of the beak. Whether they are distinct species or not I am not prepared to say. They are, however, sufficiently distinct to be kept and described separately, which is all we can say of many other closely-allied forms. Mr. Wheelwright has been good enough to send me a series of skins, old and young, with the nest and eggs, of the parrot crossbill from Sweden. There is no difference whatever in the plumage, but my specimens are rather larger than those from Sweden. Your ornithological readers will doubtless have seen Mr. Wheelwright's paper upon the plumage of these birds (Zool. 8001), in which he thinks the yellow dress that of the old male. He will, I have no doubt, work out this question satisfactorily, as he is in a country where any number of specimens can be procured. Mr. Wheelwright informs me that the parrot crossbill appears only in alternate years in the neighbourhood of where he resides. In fact, he only gets the common crossbill one year and the parrot the next, and *vice versâ*, one species replacing the other. This interesting fact looks, I think, very much like a question of maturity between the two forms. It cannot be that the stronger drives the weaker away in the struggle for existence.—*C. R. Bree; Colchester, April* 14, 1862.

Of the change of Plumage in the Crossbills and Pine Grosbeak.—In the May number of the 'Zoologist' (Zool. 8001), some observations are made by Mr. Wheelwright on the change of plumage of these birds. He begins by saying, "Even now it appears that it is not quite clear what is the true mature plumage of these birds," &c. "Referring to every British authority that I can find, I am led to suppose that the mature plumage in both species is red; in extreme age tinged with yellow," &c. "But such is not the case; the red plumage is only an intermediate stage," &c. I will not refer to British authors, but turn to Temminck, Vol. i. p. 325. "Loxia Pityopsittacus. Livrée du mâle adulte et vieux: couleurs principales du plumage d'un cendré olivâtre; joues, gorge et côtés du cou cendrés; sur la tête des taches brunes bordées de cendré verdâtre; croupion, d'un jaune verdâtre; poitrine et ventre de cette couleur, mais nuancés de grisâtre," &c. But the young male is described as having "Toutes les parties inférieures et supérieures du corps d'un rouge ponceau, plus ou moins pur, suivant que les individus sont plus ou moins éloignés du terme de leur seconde mue, qui a lieu en Avril ou Mai," &c. It therefore appears that Temminck was fully aware that "the red plumage is only an intermediate stage." Mr. Wheelwright then remarks, "I have never yet seen more than two examples of the mature green pine grosbeak: one was this last winter in a cage, where he had been confined ten years; he was a red bird when he was caught in the winter, but in the ensuing autumn he changed to bright yellow-green, and since then has undergone little or no change in his plumage; the other was shot in a wild state," &c. This sudden transformation in a caged bird is no sign of maturity. Until Mr. Wheelwright has further proof to offer in support of his views, we cannot ignore or discredit Temminck, who thus describes the old male, Pyrrhula enucleator:—"Tête, gorge et parties supérieures du cou d'un rouge orange, qui devient plus clair sur le devant du cou," &c. We may reasonably protest against caged birds being cited as instances, for we well know the variations of plumage they are subject to under confinement. The brown linnet loses all traces of its crimson dress. But one more to the point is that of the bullfinch, which not unfrequently is transformed from red to black by confinement. Need I cite more to prove that Mr. Wheelwright is not justified in assuming, that because a caged pine grosbeak lost under confinement its more brilliant hues, it would have done so had it remained at large. Having, I think, disposed of the first—*i.e.* the caged bird—I would only suggest the possibility, not to say probability, of the second, *i.e.* the wild bird, being a female (or a variety, as it is said to "varie accidentellement"), as Mr. Wheelwright admits that "It is not easy at this season (winter) to ascertain the males from the females by dissection."—*Henry Hadfield; Ventnor, Isle of Wight, May* 8, 1862.

Occurrence of the Black Redstart in the County of Dublin.—This bird is considered exceedingly rare in this country, yet in this neighbourhood it is not so uncommon. In the winter of 1858-9 I saw four examples, three catching insects upon a sunny wall in December; the fourth was caught under the slates of an outhouse. They were all females or birds of the year. The next winter none were seen. In the autumn of 1860 and the winter of 1860-61 they were absolutely common. I am sure I saw from twenty to thirty, on the average of one adult male to five females or birds of the year. This year none visited us. I am inclined to think from this that they come at periods of two years. What appears very strange to me is their wintering with us, appearing about October and leaving in the middle or latter end of January. The only reason I can adduce for this is the number of flies which hybernate in the crevices of the sea-coast rocks about here, and to which locality the bird is very partial, as well as to dunghills and sunny walls. The stomachs of birds dissected in 1860 (the ground at the time being covered with snow) were stuffed with flies, showing how plentiful the supply must be in mild winters. This bird about here is very local; I never met one beyond the limits of an imaginary circle with a diameter of about six hundred yards. The common redstart is rare, I believe, in all parts of Ireland alike.—*H. Blake-Knox; Bartragh, Dalkey, Co. Dublin; May* 17, 1862.

Occurrence of the Hoopoe in Essex.—A specimen of this bird was shot by the Rev. Mr. Keen, Rector of Erwarton, Suffolk, the beginning of the month. Mr. Keen saw the bird in his garden, and when he went with his gun the bird seemed inclined to dispute possession of the ground with its owner, as it raised its crest at him in a menacing manner. I do not know the sex of this bird. Erwarton is situated on the Stour, near Harwich.—*C. R. Bree; Colchester, May* 16, 1862.

First Appearance of the Cuckoo.—The cuckoo was heard for the first time in the neighbourhood of Shipton, on the 25th of April.—*J. Ransom; York.*

Appearance of the Swallow in 1862.—The first swallow seen in this neighbourhood was observed on Sunday, the 20th of April. The earliest observation on record is the 6th of April, and the average date, upon twenty years observation, is the 17th of April. The two swallows mentioned at Zool. 7937 were inspecting their nest upon the rafter in the stable on the 24th of April.—*J. Ransom.*

Singular Instance of Nidification of the Woodpigeon.—During a visit to Rotterdam, the following somewhat remarkable occurrence has been brought under my notice. It is well known that this town is intersected by canals, by which means vessels are enabled to lay alongside of the quays in the heart of the city and directly in front of the dwelling-houses on the opposite side of the street, the edge of these canals being generally lined with elm trees. Thither the wild pigeons resort in spring, and, heedless of the noise and stir of the traffic and loading and landing of goods on the pavement beneath, construct their nests in the top branches of the trees. Year after year many of them are plundered by juvenile depredators, but the pigeons still continue faithful to their adopted spots. This is in itself somewhat singular, considering the usually shy nature of the birds, but a more striking incident has occurred these last two years. The trees in one of the principal streets (the "Wynhaven," for the information of those knowing the town) were lopped early in spring last year, and the pair of wild pigeons accustomed to resort to the trees in front of a certain house there, finding their wonted shelter gone, after apparently some search, established their nest in the mast of a vessel (the "Admiral Wyndham," a Guernsey trader), lying alongside the quay, and two eggs were laid. Unfortunately the vessel, having completed her loading, put to sea, and the birds remained in Rotterdam while their nest and eggs were wafted away. This year, though the shelter of the trees would now seem to be sufficient, they again selected the mainmast crosstrees of a bark (the "Schuringa"), occupying the same berth, and had completed their domestic arrangements as before, when a boy belonging to a lighter conveying goods to the vessel espied the prize, and possessed himself of it. The young ornithologist met with deserved punishment, but the result could hardly have been otherwise than unfortunate for the venturesome pair, as the vessel put to sea a few days ago, whither, judging from the former case, the birds would hardly have followed their establishment.—*A. Dobrée; Rotterdam, May* 10, 1862.

Occurrence of the Squacco Heron near Redruth.—I saw a specimen of this small heron, without the dorsal or occipital plumes, just now, which I believe was obtained from the neighbourhood of Redruth. Nearly all the specimens of this small heron have come to hand in the spring of the year, and, like its congener, the bittern, at uncertain periods and at long intervals, generally, however, appearing in several instances when at all.—*Edward Hearle Rodd; Penzance, May* 1, 1862.

Note on Sabine's Snipe. — Mr. Bond, in his note on Sabine's snipe (Zool. 8000), makes the following statement: — "Mr. Gatcombe says (Zool. 7939) 'All sportsmen who have killed this bird remark that it rises without noise.'" Now that is a mistake, as I have never written a word concerning Sabine's snipe in the 'Zoologist;' and if Mr. Bond will again refer to that publication he will find that the snipe alluded to by me was a large brown variety, similar to the one described by Mr. Rodd some years since, and very different in appearance from the so-called Sabine's snipe.—*John Gatcombe; Wyndham Place, Plymouth, May* 13, 1861.

The Common Bittern in Norfolk.—Though the bittern has ceased altogether to breed in this county, its former haunts being everywhere narrowed by drainage and cultivation, and in many districts its deep booming notes having given place to the screech of the railway whistle, yet the few which regularly visit us during the winter months, and the large numbers thus occasionally met with, render it anything but a "rare bird," as generally described. Persecuted to death under this delusion, like that kindred martyr, in the spring and summer, the well-known hoopoe, each unlucky specimen is slaughtered wherever met with, and the record of one particular capture in the local papers, whilst many others pass wholly unnoticed, perpetuates from year to year the "rara avis" absurdity. From some cause not easily explained, since the cold during last winter was at no time so intense as in the previous winter of 1860-61, the arrival of bitterns on our eastern coast since January last has been altogether unprecedented. I have myself handled at least a dozen specimens sent up to Norwich for preservation, and have heard, on good authority, of quite as many more sent up to Yarmouth for sale. These birds have been killed on the different broads, chiefly in the vicinity of the coast, and, with one exception, have been met with singly between the 10th of January and the first week in April. On the 6th of March a fine pair were killed right and left as they rose from a thick tussack on Hickling Broad, and these, with a third specimen killed about the same time, I had the rare chance of dissecting in one morning. Of the two Hickling birds one was evidently older than the other, as shown by the plumage and the beautiful lilac colour, which still retained much of its vividness after death, pervading the lore or naked space between the beak and the eyes. I never had this tint so bright in any other specimen, the same parts being generally of a bluish horn-colour, but this was probably owing to its adult state and the full vigour of the nuptial season. The companion bird, which, from their rising together, I expected to find a female, proved on dissection a young male, the testes being small, about five-eighths of an inch long, and dark in colour, as contrasted with the same parts in the older bird, measuring an inch and three-quarters in length, and perfectly white. The third specimen also proved a male, exhibiting the same appearance exactly as No. 2. All three birds were in high condition, the breast and abdomen covered with layers of fat, and the stomachs of all were filled with half-digested food. From the first I took an eel quite entire, about six inches long; from the second, the remains of an eel and of several large water-boatmen (*Notonecta*), five or six at least, judging from the number of wing-cases; and from the third a roach, five inches and a half long, and the *débris* of black water-beetles (*Dytiscus marginalis*), with wing-cases complete. From a specimen killed a few weeks before, a small leach, about an inch long, was taken alive, some days after the death of the bird, and when placed in water revived and became as lively as ever. The following anecdote respecting the singular capture of a bittern, in the adjoining county of Suffolk, was communicated to Mr. J. H. Gurney by a gentleman well acquainted with the circumstance:—"Either the last week in January or first week in February four bitterns were seen near the lake at Rushbrooke Hall, near Bury St. Edmunds. One was captured by a turnkey at Bury Gaol, who, on going his rounds at night, saw some dark object stalking along under cover of the wall, and thinking it was one of the prisoners attempting an escape, the turnkey closed with it, and after some time captured it, a fine male bird, in full plumage."—*H. Stevenson; Norwich, April* 23, 1862.

Occurrence of the Iceland Gull at Plymouth.—An immature example of the Iceland gull (*Larus leucopterus*) was obtained at Plymouth on the 21st of April, the plumage of which was exceedingly light in colour and much worn. This is the second example recorded as having been killed in Plymouth within the last few months.—*John Gatcombe.*

Dates of Appearance and Song of a few of our Migratory Birds near Penzance.—Chiffchaff (in song), March 22; Wheatear (seen), March 28; Sand Martins, April 2; Blackcap (in song), April 11; Willow Wren (in song), April 12; Whitethroat (in song), April 28; Sedge Warbler (in song), May 1; Cuckoo (in song), April 26; Cuckoo (reputed), April 21.—*Edward Hearle Rodd.*

Conclusion of the History of the Incubation of the Python.

By E. W. H. Holdsworth, Esq., F.L.S., Z.S., &c.*

The python and her doings in the Zoological Gardens have been so much commented on by the daily and weekly papers, that there appeared to me to be no occasion for sending you any further notice on the subject. Opinions published in your pages lead me, however to believe that all the facts of the case cannot be known to the whole of your correspondents. I will, therefore, shortly state what has been observed in this matter of the python and her eggs, and offer some reasons for believing the snake to have been really engaged in "incubation," as that word is ordinarily understood.

The eggs were deposited on the 12th of January, and the python at once devoted herself to their care, coiling herself in the most regular manner around and over them, so that it was necessary to move the snake's head on one side in order to obtain a fair view of any of the eggs. On two occasions the python came off her eggs to alter their position, but did not leave them, and resumed her place when the rearrangement was made. The continued attention of the snake to her charge soon gave rise to a suspicion that she was incubating; and it became an interesting question whether or not, under the circumstances, there was any unusual development of heat. No satisfactory result was obtained from the first experiments, in consequence of the difficulty of using the only available thermometers. This objection, however, was removed by Messrs. Negretti and Zambra, who kindly undertook the manufacture of a suitable instrument, and soon turned out the most sensitive thermometer they have ever constructed. The following table shows the results of the experiments made with this instrument; and to exclude all possible error in using it, the thermometer was on each occasion placed and read off either by Mr. Negretti or his partner. The temperatures of both male and female snakes were observed, and, from the first, great care was taken that both reptiles should be kept as much as possible under the same external conditions. They were in the same compartment, each with moss under and a blanket over it.

---

* Reprinted from the 'Field' newspaper, but kindly communicated by the author.

Date.	Temperature on the surface.			Temperature between coils.			Air in den.
	Male.		Female.	Male.		Female.	
Feb. 12	70° 2′	....	73° 0′	74° 8′	....	81° 6′	58° 6′
Feb. 23	71 8	....	75 4	74 0	....	83 2	65 4
Mar. 2	71 6	....	84 0	76 0	....	96 0	60 0
Mar. 9	72 8	....	79 5	not taken	......	86 5	61 0
Mar. 16	72 4	....	77 6	77 6	....	86 0	66 0

It will be observed that every experiment showed an excess of temperature in the female python over the male, and especially between the coils. On the 2nd of March the excess was as much as 20°; but, at that time the appearance of the female showed that she was about to cast her skin, and two days after she left her eggs at 9 P. M., and remained off until seven the next morning. During the interval her skin came off in shreds—always an unhealthy symptom in snakes; the process lasted nearly ten, instead of the usual three or four hours. She then took up her old position on the eggs, but before she did so they were found to be nearly cold, and in the course of a day or two there was a great change in their appearance.

The temperature of the snake now became reduced to about the same as in the week previous to moulting, and remained so up to the last trial on the 16th of March. The python still kept closely on the eggs, but was very irritable and dangerous. By the end of the month it was thought advisable to remove the eggs, as they were evidently decomposing. Taking them away was no easy task, but at last it was accomplished, the snake fighting desperately to preserve her long-expected progeny. She had certainly not lost heart, or given up all hopes of bringing out her young family, as I have seen stated. The annual number of moults which snakes undergo, and the particular seasons at which they occur, are found to vary with the age, size, health and appetite of the species. As a rule, small snakes eat more frequently, and cast their skins at shorter intervals, than large ones. This applies to small species as well as to the young of larger ones. With this python the moult usually takes place twice in the year,—in the spring and autumn,—and it occurred this year at about the usual time. What I have just mentioned with regard to the moulting of snakes refers to what has been observed of these reptiles whilst in confinement; but as the observations have been made on numerous individuals which have lived many years in captivity, they may be fairly considered as a close approximation to the natural habits of the animals. If a snake is sickly, the skin, as a rule, is frequently changed, and comes off in strips or small pieces; whereas, if the reptile be healthy and vigorous, the slough is cast, even in the large snakes, in two or three pieces, and sometimes entire. It is highly probable, indeed very likely, that moulting does not naturally take place whilst the pythons are looking after their eggs; but it is certainly unreasonable, with our very slight knowledge of the habits of the great pythons, to conclude, from this one case, that everything has been in precise accordance with their behaviour in a state of nature. I am especially disposed to this opinion, after reading the account of the incubation of the python at the Jardin des Plantes. A memoir on the subject by M. Valenciennes was published in the 'Comptes Rendus' for 1841, from which it appears that the python in question (a species closely allied to the one at the Zoological Gardens) did not deposit her eggs until May 6, having changed her skin a month previously. When we consider how exceedingly variable is the nesting time in the same species among our native birds, and that the same uncertainty prevails in the period of reproduction among other classes of animals in this country, it will be hardly necessary to say that some variation may be expected in creatures subject to the unnatural conditions incident to confinement. It appears to me, then, that the argument against incubation, founded on the coincidence of reproduction and moulting, falls to the ground. With regard to the want of appetite in the python whilst on her eggs, and the inattention of her husband in not offering her food, I may mention that the female snake had fasted for twenty weeks previous to the appearance of the eggs, she ate nothing whilst they were with her, and, up to the 19th inst., had taken no food since their removal. On several occasions, however, she has drank water, of which a supply has been constantly within her reach. I regret to say that the male python has been always supremely indifferent to the state of his partner's condition and appetite, and, like a good many other creatures, thinks only of himself. The lady, however, has been well supplied with food, but rabbits or ducks have alike been considered intruders, and furiously driven away from the neighbourhood of the eggs. This snake has now fasted for thirty-four weeks; but, long time as that is, it has been exceeded before now by another python now alive in the collection, that snake having fasted for more than nine months.

That the continued attention of the python to her eggs has been for something more than protection, is rendered likely from the fact that when other snakes at the gardens deposit any eggs (which sometimes occurs) they take not the slightest notice of them, but leave them to shift for themselves. In such cases the eggs have been taken away, and occasionally hatched by artificial means. But the strongest argument in favour of incubation is *the unusual development of heat in the python, and its continued application to the eggs, the heat being most apparent on the lower surface of the body.* How can this be accounted for except on the "incubation" hypothesis? It must be remembered that this is not the first instance of such a development of heat being observed where a snake was under similar conditions. In the case at Paris, the highest temperature noted in the python was during the first day or two, and it gradually diminished until the time when the first egg was hatched. Eight eggs out of the fifteen deposited proved to be good, and after fifty-six days the young snakes made their appearance. The remaining eggs contained partly-developed embryos. M. Valenciennes states that the incubation of snakes is well known in India, and is alluded to in popular tales. He also refers to the 'Arabian Nights,' where, in the account of his "Second Voyage," Sindbad speaks of looking into a cavern, and seeing at the bottom a large serpent asleep on her eggs. The gradual diminution of temperature in the Paris python has not been paralleled in the London snake. In the latter, for reasons before given, no very accurate experiments were made during the first month, but afterwards, except just before the moult, there was only a slight variation in the quantity of heat. There is reason to believe that several of the eggs had been in process of development. One that had become displaced during the first month was found to contain a living embryo; and an apparently fully-formed young python has been taken out of another egg since their removal from the reptile-house. This little snake is about nine inches long; it has all the characteristic markings of the parents, and was almost ready for hatching. The old python cast her skin after she had been fifty-three days on her eggs; now the first young snake was hatched at Paris after fifty-six days, so we may reasonably conclude that the long absence from her eggs of our London python was the immediate cause, almost at the last moment, of their going wrong. Only a few of the eggs have yet been examined.

We all have a great deal to learn about snakes and their habits, but we shall make little progress if we refuse to admit strong evidence simply because it bears against our long-cherished ideas. The notion of a snake incubating her eggs at first took most persons by surprise, but the evidence in its favour appears to be very strong. My notice of the main facts of this case has extended to a greater length than I proposed, but I shall be very glad if what I have written should enable your readers to understand the grounds for believing that incubation is not altogether unknown among serpents.

E. W. H. HOLDSWORTH.

Sketch of an Arachnological Tour in Scotland in 1861; *with a List of Scotch Spiders.* By the Rev. O. PICKARD-CAMBRIDGE, M.A.

THERE are probably few persons who have not read of the feelings with which naturalists have before now entered on the search of a district of virgin ground,—the treasures, the rarities, the new forms that have flitted before their imaginations; the eagerness, the joy at each unknown acquisition. Some of us may have felt this even in our own now well-worked country; and I must confess that it was with anticipations and feelings somewhat akin to these that on the 22nd of June, 1861, I set forth on foot from Edinburgh for the first day of a month's tour, undertaken chiefly for the purpose of arachnologising in Scotland. Scottish ground (*in re* spiders) was, as far as I knew, virgin ground; no one, to my knowledge, had ever made any researches in Scotch Arachnology, except Mr. Hardy, of Penmanshiels, in Berwickshire; his labours are recorded in different parts of Mr. Blackwall's work on British spiders (now being published by the Ray Society); and, as far as I have understood, Mr. Hardy's researches did not extend north of Berwickshire. The ground I proposed to search was just such wild, heathy, rocky districts as in the South of England I had found so abundant both in number of species and individuals; and being so far removed in latitude, I confidently looked forward to turn up many new and perhaps singular forms, and to swell considerably the list of our native spiders. My anticipations of these untold rarities were, however, destined to be in great measure disappointed, as the slight sketch I now propose to make of my month's doings will show.

My first three days were occupied in turning over the loose stones, and searching at the roots of grass and other herbage on Arthur's Seat. Here the ground appeared in every respect most favourable for spider-life, and, except one day, the weather was fine and warm; but while, in situations similar in general characteristics, in the South of England there would have been, at this time of the year, a host almost under every stone, here a score of stones would be turned up entirely blank; and when any spiders did come to light, they were mostly of species common in most places and widely distributed, though here even individuals of common species were scarce. The only species I found here that had not come under my own eye before was an adult male of Walckenäera bicolor. After three hard days' search on Arthur's Seat, my next day was on the north side of the Pentland Hills, at the nearest point I could reach in a straight line from the Currie Station on the Caledonian Railway. Underneath the loose stones on a wall of a fir plantation, just before entering on the moor at the foot of the hills, I captured the only novelty met with in my tour, in the shape of two adult males of a very distinct species of the genus Walckenäera: to this species I have given the name of "borealis."

At the immediate foot of the hills, in a similar situation, I found an adult female (and immature specimens of both sexes tolerably abundant) of Tegenaria silvicola, of which only two British examples had before been captured—one in Norfolk, by the Rev. Hamlet Clarke; the other by Mr. Meade, in Buckinghamshire. This species would probably be found under the loose stones and lichens on all the walls in this district; and from the condition of the palpi in the males, when I was there, I should judge their time of maturity to be about the end of the summer or beginning of autumn. Should this paper meet the eye of any entomologist in the habit of working that or any similar Scotch district, he would confer a great favour on myself by giving half an hour to the bottling of all the spiders he can find under loose moss-grown stones on the tops of the walls in his beat; and among them I should confidently reckon he would bottle many of this species, and probably among them an adult male or two,—a sex, in the adult state, that I much wish to obtain. It is a small species and very active, slipping away like a shot directly the stone under which it lies is moved; sometimes it will be found on the under side of the stone lifted up. I found that the best way to capture it was to wet the fore finger and place it lightly, but quickly, on the specimen, the moment I saw it, and then, impeded by the moisture, there was not much difficulty in securing it. Several hours' severe work on the slopes of the hills, sweeping among the long heather or searching at its roots, produced only three or four species, and but very few specimens of those. An hour's beating in a fir plantation on my way back to the station, with about the same result, finished my day in this district. The day had been a most lovely one, and, it being the first time I had ever heard the wild cries of the curlew in its nesting-ground, or seen the golden plover alive in its summer plumage, it was a day that I shall never forget, though not marked by the success in spider-hunting that I had anticipated. Those who are as fond as I am of wild scenery, with the birds and beasts that inhabit it, and can recollect their first introduction to a Scotch moor, its screaming curlews and its plaintive plovers, will readily understand the pleasure of that, my first introduction to the same.

The only other capture worth special notice in this neighbourhood was of adult males of Walckenäera humilis, running on the pavements in Edinburgh in bright sunshine. I had only met with this curious but very minute black spider once before, and so, though sometimes in the most crowded thoroughfares of Edinburgh, it was not to be slighted. The passers-by would occasionally stop, probably wondering what the tall parson could be about picking up and bottling small black specks off the pavements. If they had known I was bottling spiders I might have incurred their wrath, though I doubt whether the spider, whose success in fixing its web on its seventh trial determined Robert the Bruce to try his luck once more, was of the species Walckenäera humilis; if it was, that would be some sort of a title to run on the pavements of Edinburgh. However that may be, it certainly was not the fear of Scotch wrath on this point that made me feel uncomfortable, for I confess that I always do feel just a little so for the moment, when a spider has to be captured under public gaze. To care absolutely nothing for what people think (and sometimes say) on such an occasion, is a difficult lesson to learn thoroughly. Some entomologists of my acquaintance will walk through a town, net in hand, with the utmost indifference; but for my own part I much prefer secreting the implements of the craft in my pocket until far from the gaze even of an enlightened British public, and well out on my working ground. Still I must say, weakly sensitive though I may be, to ignorant wonder and ridicule, an unknown spider taking an airing on a pavement, however frequented, has charms for me that I cannot resist.

The 31st of June found myself, my cousin (the Rev. H. A. Pickard, of Christchurch, Oxford), and another companion, toiling up the steep ascent of Ben A'an, just behind the Trosachs hotel. My cousin's bent was Lepidoptera, that of our companion was "only to go up some 'Ben' or other," and, that done, his purpose and ambition in Scotch travel would be accomplished. In the course of the ascent and descent I noted and bottled more species of spiders than I had yet seen in Scotland; but yet all were of species more or less common all over England; only one, Lycosa rapax, seemed to be rather more numerous here than I had seen it elsewhere, and much more strongly marked. This species I found (as also Lycosa andrenivora) quite on the summit of the mountain, which is only, however, about 1800 feet high. I was disappointed here in finding the juniper-bushes so very unproductive: in England I have found both juniper and furze generally swarming with spiders. The only spider found here that I had not captured before was Epëira celata, underneath dark and damp overhanging banks and rocks at the foot of the mountain. The next day was devoted to a search along the banks of the lovely Loch Katrine; but after a toilsome morning my only capture worth recording was several specimens of Linyphia triangularis, a very beautiful and distinctly marked spider that I had never seen before; it inhabits the angles and interstices of the rocky banks of the Loch, hanging head downwards in a rather irregular thin sheet of web. From the Trosachs, in the afternoon, we went on to the head of the Loch, and I immediately betook myself to a couple of hours' stone-turning on one of General Wade's abandoned military roads. These roads look now like (what in many cases they have become) the beds of winter torrents; the one I was in was then nearly dry, and covered with large boulders and water-worn stones; under these I captured immature specimens, both male and female, of the curiously shaped Walckenäera acuminata. The probable reason for the extraordinary position of the eyes in the adult male of this species has always been a great puzzle to me: instead of being placed, as in most spiders, on the more or less convex surface of the cephalothorax, they are hoisted up on a kind of stem or stalk, which issues perpendicularly from the front of the cephalothorax to a height equal to nearly half the entire length of the spider. On the summit of this stalk are placed two of the eyes, looking upwards; two more are seated just below, looking forwards; and the rest, two on each side of a slight enlargement of the stalk, a little below again, and looking out sideways. The relative situation of the eyes in the immature male is the same, but it seems that they are not forced up, as it were, to this great height until the spider is just attaining maturity, for in some that I captured, apparently with only one more moult to undergo before becoming adult, the eyes were on a sort of bluntish cone, which, though considerably elevated, yet bore no resemblance at all to the fully-developed eye-stalk. Whether it is necessary or not that the female should be such a far-seeing personage as the male, one can only conjecture, but it is certain she never lifts her eyes as high as her better half, being content to look out from a much less lofty watch-tower. If this spider were of a roving nature we might see a kind of advantage that it would have over its congeners by a larger range of vision from such a disposition of the eyes, but as it is, as far as I have observed it, chiefly a dweller under a damp stone, it is difficult to conceive but that this long stalk on its head must, in such a situation, be rather in the way than otherwise. Perhaps such peculiarities of form are only analogous to the male appendages of hair, beard, &c., among animals of higher classes, and the highly-developed tails, combs, wattles, &c., among birds. All these are generally considered to be merely ornamental, although the necessary result of the male organization, and are almost invariably put on just at the period of maturity. Like the slender eye-stalk of this Walckenäera, too, these exaggerated parts seem to be, as far as we can judge, often not only superfluous, but also indirectly injurious to the individual.

Underneath these stones I also captured a good many of a rather rare and local spider, Lycosa piratica, mostly adult females, with egg-cocoons attached to their spinners. Linyphia longidens I also met with here for the first time, but all immature.

After a substantial dinner and night's rest at the Stronachlacher inn, at the head of the Loch, we reached Inversnaid (on Loch Lomond) in good time next morning. Here, while waiting for the steamer to Inverarnan, I occupied a couple of hours in exploring the wood at the back of the hotel, but found nothing of any rarity, and indeed scarcely a dozen specimens in the whole. At Inverarnan we found the coach waiting to convey us to Fort William through the far-famed and noble pass of Glencoe; but as my object here is not to describe the imposing scenery of that grand pass, I will only remark that those who have not seen it ought to see it. The next day was devoted to the ascent of Ben Nevis, picking up what insects and spiders we could on our way. We started on the ascent at half-past 11 A.M., and, without much loitering to entomologise, reached the summit at half-past 3, and arrived at Fort William again at 7 P.M.; the distance gone over in the bare ascent and descent being about eighteen miles. The ascent is easy enough, though rather tiring, but the descent is one unbroken rush "down the side of a house" for the last two hours of it. We found ourselves much shaken by the pitching from ledge to ledge of this almost semi-perpendicular descent, and next day were quite content to explore quietly, and perhaps more thoroughly than we should otherwise have done, the moor lying between Fort William and Ben Nevis. The only capture of any value made here was an adult male of Neriëne vagans. I found here, as I had done on Ben A'an, Lycosa rapax abundant, and here as high up as 3000 feet from the level of the sea. After another day's work in this locality, we passed up the Caledonian Canal to Inverness, stopping to visit the Falls of Foyers, on the banks of Loch Ness. Here I found Linyphia cauta, and other species fond of dark damp situations. From Inverness (where it rained in torrents the whole time we were there) our next point for entomologising was Loch Rannoch, already so famed for Lepidoptera and Coleoptera. Here I had two hard days' work at spiders, during which time the only species of note discovered were Lycosa fluviatilis among the water-worn stones on the shores of the Loch, and Tegenaria silvicola in situations similar to that in which I had previously found it on the Pentlands. During the remainder of the ten days that we stayed here, my time was divided between spiders and Lepidoptera, many species of which last were in great abundance, and much wanted to fill gaps in my cabinet. Spiders were much more plentiful in some parts of the forest on the south side of the Loch than they had appeared to be anywhere since we left the Trosachs, but still nothing in number of species or individuals to what such a situation would have produced further south. I imagine the hosts of large black ants in the Rannoch district must make great havoc among the young broods of spiders: in my own neighbourhood in the South of England, where the same ant is very abundant, I find it is almost useless to search either for spiders or larvæ of Lepidoptera in the immediate vicinity of their nests. Loch Rannoch was the last regular working place we had; for the next few days after leaving it, except an hour or two's occasional search, we were constantly on the move, going first to Kenmore, thence down Loch Tay to Killin, from Killin by Loch Earnhead and Loch Lubnaig to Callander, and thence to Glasgow, winding up our tour with a pleasant day or two at the hospitable mansion of the Laird of Dalswinton (MacAlpine Leny, Esq.), near Dumfries. On the door-steps of this mansion I made the last addition to my list of Scotch spiders, by the capture of adult males of Neriëne flavipes.

As I observed before, I expected to find many novelties among Scotch spiders, but from what I could observe during this tour, especially among the more common species, I feel convinced now that there are not so many new forms to be discovered in Scotland as I had imagined. It must be acknowledged that the time of my tour was not the most likely time to meet with adult specimens of many species, particularly in the genera Thomisus and Salticus; and from the time of our leaving Edinburgh the weather was for the most part wretchedly wet and cold, scarcely one completely fine day; so that I could not extend my search, either as to time or distance, as I had intended. Still no doubt there are many more species to be added to the Scotch list than those I met with, and perhaps a search about the end of May and beginning of June would, in warm sheltered spots, produce many adults of species I did not come across at all. The autumn, too, if fine, is about the most prolific season in numbers, and many species are not adult till then. I had expected to meet with more examples of the genus Salticus, the rocky and heathy ground being just such as they delight in, but, as the list subjoined will show, I only captured two species. Dr. Leach (in the Supplement to the fifth and sixth editions of the 'Encyclopædia Britannica,' article "Annulosa") records that the curious ant-like spider, Salticus formicarius, is found, though rarely, in Scotland. This is a species I have never seen, and much wished to meet with, but I had no clew to its locality.

I trust this slight sketch and list of Scotch spiders will induce some naturalists resident in Scotland to collect and study the order regularly, for it is only by residents working constantly and thoroughly their own localities, however circumscribed, that the species of a district will ever be known. In a flying tour, if weather and every other contingency fall out in one's favour, one may do a great deal; but in nine cases out of ten these fall out the other way. And then, again, with no special locality in view to work thoroughly, the desultory mode of operations necessitated by being often on the move, though a very pleasant and enjoyable way of working, is certainly far from the best for scientific purposes. That a large area is not required in all cases to ascertain the general spider-produce of a district, may be concluded from the fact that in one day last May, on Bloxworth Heath, Dorset, in company with Mr. Tuffen West (now engaged in illustrating Mr. Blackwall's work on British spiders), I captured upwards of forty species in a piece of heathy ridge not more than four feet square; and among these were one species new to Science, and another up to that time unrecorded as British. Such fertile spots are only to be found by knowing thoroughly all the ins and outs of a district, in a way that no one but a resident can ascertain them. In the limited space of the southern half of the county of Dorset I have as yet captured about two hundred species, and I can hardly imagine Scotland to possess fewer than this. The Scotch list at present numbers eighty-three; so that on this supposition there is plenty of room for further discovery yet. I shall hope, therefore, that a sort of commencement, however meagre and imperfect, having been set on foot, some industrious collectors will soon add to it; and I can only repeat here again how much pleasure it will give me at any time to receive specimens from Scotland for examination, and to return them, if wished, with the names and such other observations as I may be able to make upon them.

Since writing the above I have received a small bottle of spiders from Sutherlandshire and Ross-shire, kindly collected for me by the Rev. J. F. Montgomery, of Edinburgh: this box contains, among others, seven species I did not meet with myself during my tour.

List of Spiders found.

Tribe OCTONOCULINA.—Fam. LYCOSIDÆ.

Lycosa agretyca. Arthur's Seat.

L. andrenivora. Ben A'an.

L. rapax. Ben A'an, Ben Nevis, Schiehallion, &c., &c.

L. saccata. In dry watercourses among water-worn stones, everywhere.

L. lugubris. In woods at foot of Ben A'an.

L. obscura. Among heath, Ben A'an, Ben Nevis, &c.

L. exigua. Everywhere.

L. fluviatilis. Among stones on shores of Loch Rannoch.

L. piratica. Under stones near head of Loch Katrine, and among wet moss at Loch Rannoch.

Dolomedes mirabilis. Foot of Ben A'an.

D. fimbriatus. Not met with by myself, but the late Mr. Foxcroft showed me several adult females captured at Loch Rannoch in 1858.

Fam. SALTICIDÆ.

Salticus scenicus. Arthur's Seat, &c., on posts and palings.

S. reticulatus. Under stones, Arthur's Seat.

Fam. THOMISIDÆ.

Thomisus cristatus. Everywhere.

T. erraticus. Arthur's Seat.

Thomisus bifasciatus. Arthur's Seat.
T. pallidus. Arthur's Seat, and on Pentlands.
T. Trux. Arthur's Seat.
Philodromus cespiticolis. On firs, &c., Loch Rannoch.

Fam. DRASSIDÆ.

Drassus pusillus. Under stones, Arthur's Seat.
D. sericeus. Under stones, Arthur's Seat.
D. cupreus. Under stones, Arthur's Seat.
D. nitens. Under stones, Arthur's Seat.
D. propinquus. Under stones, Arthur's Seat, frequent.
Clubiona amarantha. Among heath, Pentland Hills.
C. epimelas. In wood at Inversnaid (Loch Lomond).
C. brevipes. Among heath, Pentland Hills.
C. trivialis. One specimen, Pentland Hills.
C. erratica. Among heath, &c., Loch Rannoch.

Fam. CINIFLONIDÆ.

Ciniflo atrox. Loch Katrine, Loch Rannoch, &c.
C. similis. Everywhere.
Ergatis benigna. Among heather, foot of Ben Nevis.

Fam. AGELENIDÆ.

Agelena montana. At roots of heath, Pentland Hills.
Tegenaria civilis. Edinburgh, Trosachs, &c.
T. silvicola. Under stones on walls, Pentlands and Loch Rannoch.
Textrix lycosina. In crevices of rocks and walls, Ben A'an, Ben Nevis, Loch Rannoch, &c.

Fam. THERIDIIDÆ.

Theridion lineatum. Trosachs.
T. tepidariorum. In greenhouses, Botanic Gardens, Edinburgh.
T. nervosum. Trosachs; Loch Rannoch; Edinburgh; and Dalswinton, Dumfries.
T. varians. Dalswinton.
T. filipes. Under stones, Loch Rannoch.

Fam. LINYPHIIDÆ.

Linyphia montana. Trosachs and Loch Rannoch.
L. triangularis. Banks of Loch Katrine.
L. fuliginea. Black Forest, Loch Rannoch.

Linyphia rudea. Received from Ross-shire and Sutherlandshire.
L. minuta. Trosachs, &c.
L. cauta. Falls of Foyers.
L. socialis. On trunks of trees, foot of Ben A'an.
L. alticeps. Received from Ross-shire.
L. longidens. Under stones, near head of Loch Katrine.
L. tenuis. Received from Ross-shire.
L. terricola. In wood at Inversnaid, and received from Ross-shire.
L. Claytoniæ. Loch Rannoch.
L. obscura. On firs near Pentland Hills.
Neriene marginata. Trosachs.
N. bicolor. Received from Ross-shire.
N. livida. Under stones, Arthur's Seat.
N. vagans. One on footway near Edinburgh, and one at foot of Ben Nevis.
N. pygmæa. Received from Ross-shire.
N. flavipes. On door-steps at Dalswinton, Dumfries.
N. longipalpis. Everywhere.
N. trilineata. Trosachs.
N. rubens. Received from Ross-shire.
N. variegata. Received from Ross-shire, and on Arthur's Seat.
N. rubripes. Under stones, head of Loch Katrine.
Walckenäera acuminata. Under stones, head of Loch Katrine.
W. borealis. Under stones, on wall near Pentland Hills.
W. bicolor. One under a stone, Arthur's Seat.
W. depressa. Under stones, Arthur's Seat.
W. humilis. On pavements, Edinburgh.
Pachygnatha Degeerii. Arthur's Seat.

Fam. EPEIRIDÆ.

Epeira quadrata. Loch Rannoch.
E. apoclisa. Foot of Ben Nevis.
E. similis. Everywhere.
E. calophylla. Received from Ross-shire.
E. cucurbitina. Loch Rannoch.
E. fusca. Foot of Ben A'an.
E. autriada. Foot of Ben A'an.
E. celata. Foot of Ben A'an.
E. inclinata. Everywhere.
E. Diadema. Everywhere.
Tetragnatha extensa. Trosachs.

Tribe SENOCULINA.—Fam. DYSDERIDÆ.

Dysdera Hombergii.	Trosachs.
Segestria senoculata.	Trosachs, Pentlands, and Loch Rannoch.

O. PICKARD-CAMBRIDGE.

Bloxworth, Blandford, Dorset,
March 31, 1862.

On the use of Glycerine for preserving Shells.—I wish to call attention to the use of glycerine in preserving shells. My father having some fine specimens of Crenatula which betrayed a tendency to crack, we applied a few drops of purified glycerine to them, rubbing it in with the finger. This effectually cured them without giving the unnatural lustre of oil. We have also used the same substance with Unios and other bivalves with success, and to many univalves having a scaly epidermis. We also tried to get rid of the unsightly film of salt which a dry atmosphere brings out on so many univalves, but failed at first. We have now, however, found out the proper treatment. The shells should first be soaked in spring water for about a fortnight, the water being changed several times. When they are dried they appear as bad as ever, but are very rough to the touch. If a little glycerine be now rubbed in, the proper colour comes out perfectly. In this way we have restored Phasianellæ and others to a fine state. The method will not be found to succeed with shells that have a highly polished surface, as Cyprææ. An additional recommendation is that the glycerine may always be washed off.—*F. Archer.*

Occurrence of Deilephila lineata at Deal.—A specimen of this rare insect was brought in by a boy, who took it at rest on a stack. It was very little wasted, and far from a bad specimen. This must have lived through the winter.—*H. J. Harding; 171, Lower Street, Deal, May 6, 1862.*

Capture of Deilephila lineata and Heliothis peltigera near Plymouth. — On Monday, the 5th instant, I was called to inspect some recent lepidopterous captures, and amongst them found two specimens, male and female, of Deilephila lineata. The particulars of their capture are as follows:—During the evening of the 29th of April, Mr. Bolitho, of Laira, observed a large moth feeding on the wing, humming-bird fashion, and he, thinking it some rarity, was quickly on the spot, net in hand, but the moth would not allow a close approach, and was instantly out of sight. This insect was not observed again till the evening of the 2nd instant, when a female specimen came to the flowers in the garden, and whilst engaged absorbing the sweets therefrom was dexterously swept into a bag-net by Mr. Bolitho. A second specimen, a male, was captured, on the 4th instant, by the same hand, at the same place, and in the same manner as the first-mentioned specimen. A third specimen was also seen. The above-named gentleman also took a female of Heliothis peltigera: this species was likewise visiting flowers in the evening; it was taken very early in the season, namely, on the 28th of April.—*J. J. Reading; Plymouth, May* 17, 1862.

Capture of Deilephila lineata at Colchester.—A specimen of this rare Sphinx was found by a boy on St. John's Green, in this town, on Wednesday, the 14th instant. It was carried to Mr. Laner, of St. John's Place, to whose collection it has been added. It is the only British specimen I ever saw on the setting-board.—*C. R. Bree; Colchester, May* 16, 1862.

Eupithecia arceuthata, Frey., *and E. helveticata*, Bdv. *: are they distinct?*—Towards the end of September, 1860, Mr. Wilson, of Edinburgh, kindly sent me a few full-fed larvæ of Eupithecia helveticata. These spun up immediately. Shortly afterwards I turned out upon our Buckinghamshire hills, armed with a stout stick and large umbrella, and thrashed the wild junipers, which in certain spots grow there pretty plentifully. I beat a few quite small larvæ, much resembling those which I had received from Scotland. These in process of time became full fed, and from the beginning of October to the end of November I beat a good many more from the juniper bushes. They were decidedly larger and stouter than the Scotch larvæ, and I fancied I could detect other slight differences, but, having none of the latter by me for comparison, I could not be sure. It also struck me as singular that the larvæ here in Buckinghamshire should be full fed from one to two months later than in Scotland. On the whole, however, I voted them E. helveticata. In May and the beginning of June the perfect insect appeared, and I was much surprised to breed a rather large leaden-gray pug, in markings certainly resembling E. helveticata, but very different in colour and much larger in size. A short time since I had an opportunity, through the kindness of Mr. Stainton, of sending a pair of these insects to Professor Zeller, at Mesnitz. He at once pronounced them to be E. arceuthata, *Frey.* (Gn. vol. ii. p. 321), an insect which occurs freely in his neighbourhood. He very obligingly sent me some bred specimens which precisely corresponded with my Buckinghamshire insects. Professor Zeller, in the course of his letter, however, remarked that this species and E. helveticata, *Bdv.* (Gn. vol. ii. p. 320), were identical. He had not, however, himself either taken or bred the latter insect. Mr. Doubleday and Mr. Bond are inclined also to think that E. arceuthata is merely a local variety of E. helveticata. I think myself they are very possibly right; but still I am of opinion that we can come to no decision till both insects have been bred from the egg, and a minute and careful examination and comparison of the larvæ made. This I believe has never been done by any entomologist at home or abroad, and the amalgamation of the species is therefore at present, to say the least, premature. In October and November, 1861, I again met with the larva of E. arceuthata on the Buckinghamshire hills. I have now a few pupæ, and I hope to obtain impregnated eggs the end of this month or beginning of June. If any Scotch entomologist can procure me a few eggs of E. helveticata, I will do my best to breed the two sets of larvæ side by side, and to set the matter at rest.—*H. Harpur Crewe; The Rectory, Drayton-Beauchamp, Tring, May* 10, 1862.

Capture of Stauropus Fagi at Henley-on-Thames.—On Wednesday, the 14th instant, I captured a very fine specimen of Stauropus Fagi, at rest on beech.—*H. Stubbs; Henley-on-Thames, May* 16, 1862.

Agrotis suffusa taken at Sugar in April.—On the 28th March I captured Agrotis suffusa at the sallows near here, and, as the 'Manual' gives September as the date of its appearance, and does not mention the fact of its hybernating, I think this will be of general interest. It was a female, and during that night and the next day she laid about twenty-five eggs, which hatched on the 5th of April, and are now feeding on dock, seeming to prefer that to grass.—*H. Bartlett; 33, Old Steine, Brighton, April* 19, 1862.

Will 1862 *pass over without an Entomological Intelligencer?*—I read with much gratification the Rev. J. Greene's remarks (Zool. 7970) on the great want which all working entomologists cannot but feel, occasioned by the demise of the late 'Intelligencer,' and should like to know if this year is to pass without an effort being made to fill its place. If so, I fear the brightest days of Entomology are gone, which must be evident to most who remember that when the 'Intelligencer,' on the conclusion of its first volume, was to be discontinued for only six months, the ardour of entomologists led to the publication of the 'Substitute' for the brief intervening period, although it was well known that the former journal would reappear the following spring. If such was then required during the winter, still more do we now require a "substitute" during the summer. Will not some of our leading entomologists exert themselves and give their support for this purpose? Most would be contented to have a weekly journal from March to October, although more satisfied could it be had all the year round; and if it is thought that its circulation would not support it at previous prices, few would object to a moderate increase of charge, rather than be deprived of so pleasant a companion. I am sanguine that entomologists would unite to increase its circulation, and do their best to prevent its discontinuance for want of support. Cannot the now popular expedient of a guarantee fund be resorted to, or is it possible to conduct such a journal on the "limited liability" pinciple, which might make many of the shareholders so anxious for their *protegé's* well doing that they would not fail to supply it with proper sustenance, and with an experienced editor as its doctor, who would guard against any of the improper ingredients referred to by the Rev. J. Greene being introduced to affect its healthy action.—*R. Anderson; Coney Street, York, May* 5, 1862.

[I think this matter is in a nutshell: if any entomologist will find the money and the contributions, another 'Intelligencer' might be started to-morrow.—*Edward Newman.*]

A Review of the Genus Ptinella.

By the Rev. A. MATTHEWS, M.A.

THE summer of 1861 amply realized the expectations I had formed of the probable abundance of the species as well as the individuals of the genus Ptinella. Assisted by Mrs. Matthews and our friend Mr. Arthur Hildebrand, a zealous and successful entomologist, I collected and examined above seven hundred specimens during the months of June, July and August, although the scene of our operations was confined to the midland counties of Leicester, Nottingham and Derby. The examination of this immense number has brought to light many very interesting facts relating to the specific distinctions of these curious little animals, and has added at least one species to the list of those already known. I am perhaps wrong in using the term "facts" for matters not yet positively proved, but I think the general evidence so strong in favour of the conclusion I have formed as to leave little doubt of its being correct.

Any entomologist who has looked, even in the most casual manner, at Gillmeister's valuable monograph on the Trichopterygidæ, can hardly fail to have noticed the great analogy between the three winged Ptinellæ figured on one side of pl. 324 (Sturm's 'Deutschland's Fauna'), and the three apterous species on the opposite side of the same plate, and this resemblance is rendered more remarkable by the circumstance that at the time the 'Monograph' was published no other species of Ptinella had been discovered. For my own part I always had an idea that there were in reality but three species, of which the corresponding winged and apterous individuals were respectively the sexes. And although my subsequent observations have not to its full extent verified this idea, yet quite enough has been discovered to prove that the wings form a sexual mark rather than a specific distinction. Of one species alone, P. ratisbonensis, I have before me more than five hundred examples. Of this multitude about one-fifth exhibit black wings conspicuously developed, although varying in size; in above two hundred others the wings may still be seen through the transparent elytra, but much diminished in bulk, and of a pale colour; the remainder on a superficial examination present no appearance at all of wings, but when dissected are found to possess those limbs in a rudimentary state. The variation in the size and colour of the wings is not occasioned by the more or less matured condition of the individual, since specimens recently hatched and in a soft state are found both with and without coloured wings. It is therefore evident in this case that no specific distinction can be formed on the apparent absence or presence of the wings. Again, the colour of the eyes and the depressions on the disk of the thorax are equally uncertain as marks of difference. In the immense series now before me the colour of the eyes varies in different individuals from a deep black to an orange of the same shade as the other parts of the head, so that it becomes difficult to tell whether there are any eyes at all. The depressions on the thorax are even more variable. A few of my specimens, and but a few, have two placed near the base of the thorax; in others these depressions are connected together, still occupying the same position; in others, again, there are two or more placed near the middle of the thorax; while by far the greater part have the thorax unmarked by depressions in any part. And here I must observe that in many of Gillmeister's figures the foveolate markings are too abruptly defined. This is very evident in his figures of Ptilium canaliculatum and some of its allies. In all these the thorax exhibits a central channel with an equally clear line on either side; but in many of these species the lateral lines are so faintly impressed as to be perceptible only in a favourable light and under a high power; though the central channel can almost be seen with the naked eye. There is also another feature in Gillmeister's figures which requires notice; I mean the scale-like appendages at the ends of the elytra in some of his Ptinellæ. This is merely an optical illusion, and is caused by the hinder margin of the first segment of the abdomen seen through the transparent elytra and cutting off the rounded end of each, thereby giving it the appearance of a semicircular scale. The truth of this may be readily ascertained by raising the elytra with a fine point.

Except this short digression on Gillmeister's figures, all that I have hitherto said refers exclusively to the species which I suppose to be P. Ratisbonensis, and I think is sufficient to prove that all those varieties belong to one and the same species. It is, then, reasonable to suppose that a similar relation will be found to exist between other winged and apterous insects in this remarkable group; and although some species may be invariably apterous, yet these appear to form an exception to the general rule of the genus.

Two species, P. gracilis and P. angustula, both as well or better known on the Continent than any of their congeners, offer a good illustration of this theory. The black eyes and fully-developed wings of P. gracilis are the only points on which it materially differs from P. angustula, its apterous analogue; both of them exhibit the same distinctive characters in the shape of the head and thorax, and in the slender and pointed abdomen. Strong corroborative evidence on the same point may also be obtained from a new and very distinct species which we found near Bakewell, Derbyshire. Of this, which is widely removed from any known species by the shape of the thorax and abdomen, and especially by the length and slenderness of its legs, five specimens were taken, agreeing exactly with each other in all the characters I have mentioned, one specimen alone being furnished with ample wings, while the rest appear destitute of those limbs. The question of thoracic foveæ is also affected by this species, the thorax in two specimens showing two considerable depressions, although in the others its surface is smooth. On the whole I do not see how we can arrive at any other conclusion than that the wings are merely a sexual mark among the species of this genus, and that in future other characters must be required to separate them from each other. The characters I would rely upon for specific distinction may readily be found in the general shape of the head and the prominence of the eyes, the outline of the thorax, the length of the elytra, and the more or less obtusely pointed abdomen; the comparative length of the legs and antennæ should also be taken into consideration, although the species do not differ so much in this respect. In colour they resemble each other very closely, and this is often so much affected by the manner in which they are killed that it cannot be considered of much importance as a mark of difference. Of these characters the length and shape of the abdomen is one of the most useful, and it is of all the most difficult to preserve. In specimens which have been killed in the usual manner by immersion in hot water the abdomen generally contracts so much in drying that its original form is altogether lost. Instead of the hot water system I would recommend equal proportions of spirits of wine and water. In this they may remain for some days without injury, but when once taken out of the bottle they must not be left for many minutes before they are gummed on card, and even then some will still shrink up. A better plan than this, under certain conditions, is to use benzine collas instead of spirits of wine and water, but it requires more care, and should only be used when they can be set soon after they have been killed; if allowed to remain in the liquid for many hours the limbs become rigid, and it is almost impossible to set them properly.

In searching for Ptinellæ the tree on which they are found will often assist the collector in distinguishing the species. It cannot always be relied upon, as the same species may occur on trees of various kinds, but nevertheless it so often happens that trees in different localities, although of the self same sort, are inhabited by different species of Ptinellæ, that all should be carefully examined; of course the chance of finding a fresh Ptinella is much increased when the tree is of a different species.

There is yet another circumstance respecting the affinity of the winged and apterous Ptinellæ which must not be overlooked, and which can be observed only in the act of collecting; it is this, that although winged examples are comparatively very rare we have invariably found them in company with that particular apterous species to which they bear the strongest resemblance.

In reviewing the nomenclature of the Ptinellæ I particularly wish to direct attention to this point, that all the British specimens of the genus now bearing the name of P. denticollis belong to the P. aptera of Guerin, and, as I have been the cause of this error, it is necessary to add some explanation of its origin. When I was in Paris two years ago M. Fairmaire very kindly gave me a pair of Ptinellæ, supposing them to be specimens of his own P. denticollis, both of which have since been proved to be P. aptera. In justice to M. Fairmaire I must say that they were taken from his boxes by candle-light, and had he anticipated the purpose to which they have been applied, he would doubtless have been more careful in his selection. With these specimens all the British examples have been compared, and of course wrongly named. A few weeks ago M. Fairmaire gave me other, and this time authentic, specimens of P. denticollis, as widely different from the former as any two species of the genus. The true P. denticollis has occurred, though rarely, in England; all the insects at present bearing that name in British collections are P. aptera. As that species was fist described by M. Guerin, there can be no doubt but that the French specimens represent the true P. aptera, though I cannot suppose that the species figured by Gillmeister under that name is identical with M. Guerin's insect; his description, his figure, and the natural size given in his plate, all combine to make it the largest of the apterous species, while in truth it is the smallest of all except P. angustula; indeed his figure and description appear more applicable to the apterous variety of P. ratisbonensis than to any other species.

The mistake I have just mentioned is the only one of general importance, though others have occurred, and have been in most instances already corrected. It could hardly be wondered at, when entering upon ground previously untrod by any British entomologist,* without a single type to guide me, and nothing but descriptions to refer to, that I should occasionally fall into a mistake of identity among insects so obscure and so little known as these. But I have lately spent a considerable time in Paris in investigating their nomenclature, and have compared all the British species of Trichopterygidæ with those contained in the collection of M. Aubé. Through the kind assistance of that gentleman, MM. Fairmaire and Reiche I have, I hope, reduced the names of the whole family to a strict uniformity with those in use on the Continent.

The Trichopterygidæ in the magnificent collection of M. Aubé were formerly examined and named by Gillmeister, and may justly be considered as the types of that author.

---

* In April, 1858, I announced the capture of Ptinella britannica, the first of the genus ever met with in this country (*vide* Zool. 6032). It is still unique, and totally distinct from any other known species.

In the case of P. ratisbonensis alone a doubt may still exist, as none of the French collections possessed that insect previously to my visit, but I have M. Aubé's authority for supposing the species which we found in such abundance last year to be identical with the T. ratisbonensis of Gillmeister.

The following is a list of the British Ptinellæ, with the diagnostic characters of each species. I have thought it best to retain the species, as they are separated in the new edition of Schaum's 'Catalogue,' noting those which I suspect will prove to be the sexes of other species.

Species Ptinellarum inter se distinguuntur signis his propriis, videlicet.

1. *P. ratisbonensis*, Gillm. L. c. $\frac{7}{16}$—$\frac{9}{16}$ lin. Magnitudine majori, capite rotundato, et abdomine obtuso.
2. *P. Maria*, n. s. L. c. vix. $\frac{8}{16}$ lin. Totâ formâ latâ, ac præsertim pronoto rotundato, pedibusque longis, gracillimis.
3. *P. britannica*, Matth. L. c. $\frac{7}{16}$ lin. Toto corpore rugose-punctato, capite oblongo, basi latiori pronoti, atque membris robustis.
4. *P. denticollis*, Fairm. L. c. $\frac{7}{16}$ lin. Formâ convexâ, obovatâ; capite lato; capite et pronoto lævioribus, angulis posticis pronoti acutis, fere productis; elytris brevioribus, apicibus valde rotundatis, atque abdomine obtuso-conico.
5. *P. punctipennis*, Fairm. L. c. $\frac{7}{16}$ lin. Haud a P. denticolle differt, nisi colore fusco-piceo, alis amplis, elytrorumque apicibus validissime rotundatis. Sexum alterum ejusdem speciei credo.*
6. *P. tenella*, Erichs. L. c. vix. $\frac{7}{16}$ lin. Formâ elongatâ lineari; pronoto parvo; elytris prælongis, apicibus minime rotundatis; et abdomine acuto-conico.
7. *P. aptera*, Guerin. L. c. $\frac{6}{16}$ lin. Formâ, brevi, ovatâ, depressâ; latitudine et lateribus ovalibus pronoti.
8. *P. testacea*, Heer, (*limbata*. Heer). L. c. $\frac{6}{16}$ lin. An alter sexus præcedentis: alis amplis, atque oculis nigris prominentibus tantum differt.

---

* Only two examples of this insect have been found, *viz.*, the original specimen in M. Fairmaire's collection, and one in the collection of Mr. Janson. With the circumstances of the capture of M. Fairmaire's specimen I am not acquainted, but at the same season of the year, and in the same part of the country in which the latter specimen occurred, Mr. Janson also met with the true P. denticollis.

9. ***P. angustula,*** Gillm. L. c. $\frac{6}{16}$—$\frac{7}{16}$ lin. Formâ angustâ, elongatâ; elytris brevissimis subquadratis; atque abdomine elongato-conico, segmentis sex apertis.

10. ***P. gracilis,*** Gillm. L. c. $\frac{6}{16}$—$\frac{7}{16}$ lin. Sexus alter præcedentis: alis amplis, oculisque nigris tantum ab illâ differt.

The following is a description of the new species in the foregoing list:—

PTINELLA MARIA.

L. c. vix. $\frac{8}{16}$ lin. Per totum corpus subtilius punctata, sericeo-pubescens; capite lato, prominulo, in frontem valde rotundato, ore producto; pronoto convexo, capite latiori, medio latissimo, lateribus valde rotundatis, ad basim paulo contractis, margine anteriori rectâ, angulis obtusioribus, angulis posticis parvis acutis; scutello modico triangulari; elytris pronoto fere duplo longioribus, dimidium abdominis tegentibus, pronoto latioribus, ac paulo profundius punctatis, apicibus rotundatis; abdomine lato, obtusissimo, segmentis quinque apertis, lateribus marginatis; pedibus longis, gracillimis.

Alata. Nigro-castanea, capite, pronoto, atque abdominis lateribus fere nigrescentibus, elytris, medio atque apice abdominis multo dilutioribus; alis amplis, nigris; oculis nigris prominulis; pedibus atque antennis pallide testaceis.

Aptera. Rufo-testacea, colore uno; oculis parvis distinctis. Aliorsum alatis haud differt.

Rarius pronotum foveas habet duas ad angulos posticos.

Hæc species præclara, in honore uxoris meæ, cujus operâ capta fuit Maria appellata, differt ab omnibus formâ latâ corporis totius, ac præsertim pronoto rotundato; pedibusque longis atque gracillimis.

Moderately punctured throughout, shining, clothed with a fine pubescence. Head broad and prominent, very much rounded in front, and abruptly narrowed towards the mouth. Thorax convex, wider than the head; the anterior margin straight, with the angles rather obtuse; the sides very much rounded and slightly contracted towards the base, with the posterior angles small and acute. Elytra about twice as long as the thorax, covering one-half of the abdomen, rather wider than the thorax, and rather more coarsely punctured, with the ends rounded. Abdomen wide and very obtuse, with five segments uncovered and the sides margined. Legs and antennæ long and slender. The thorax occasionally has two depressions near the base.

With Wings. Dark chesnut. Head, thorax and sides of the abdomen nearly black. Elytra, disk and apex of the abdomen much paler. Wings ample, black. Eyes black and prominent. Legs and antennæ pale testaceous.

Without Wings. Rufous-testaceous throughout. Eyes small, but distinct. Legs and antennæ pale testaceous.

This insect presents at first sight much the appearance of an Omalium. I have given it the name of Mary in honour of Mrs. Matthews, by whom the greater number of this species, together with many hundreds of its congeners, were taken.

It differs from every other species in the greater width of the whole body, the rounded shape of the thorax and the long slender legs.

A. MATTHEWS.

Gumley, Market Harborough,
April 17, 1862.

Proceedings of Societies.

ENTOMOLOGICAL SOCIETY.

May 5, 1862.—FREDERICK SMITH, Esq., President, in the chair.

Donations.

The following donations were announced, and thanks ordered to be given to the donors:—'Journal of the Proceedings of the Linnean Society of London,' Vol. vi. No. 22; presented by the Society. 'The Zoologist' for May; by the Editor. 'Sitzungsberichte der Königl. bayer. Akademie der Wissenschaften zu München;' by the Academy. 'Journal de la Société Entomologique Belge,' Tome v.; by the Society. 'The Intellectual Observer,' No. 4; by Messrs. Groombridge & Sons. 'The Journal of the Society of Arts' for April; by the Society. 'The London Review' for April; by the Editor. 'The Athenæum' for April; by the Editor. 'The Journal of Entomology,' No. 5; by the Proprietors.

Election of Members.

George Robert Gray, Esq., the Rev. T. H. Browne, and Alfred Haward, Esq., were ballotted for and elected Members of the Society.

Vacancy in the Council.

The President announced that a vacancy had occurred in the Council by the resignation of Dr. Knaggs; that the Council recommended to the Society the name of Mr. Stainton for election to the vacant seat; and that the next ordinary Meeting of the Society would be a Special General Meeting, for the purpose of electing a new member of Council.

General Index to the Second Series of the 'Transactions.'

The President also announced that the General Index to the Second or New Series of the 'Transactions' was on the table, ready for gratuitous distribution among the Members and Subscribers who had paid Subscriptions for 1861.

Exhibitions.

Professor Westwood exhibited a box containing a number of illustrations of the economy and transformations of various species of insects, which had recently been presented to the Oxford Museum by Mr. S. Stone, of Brighthampton. Amongst these were specimens of Volucella pellucens (together with its eggs and pupæ), reared from the nest of the common wasp, on the larva of which the larva of the Volucella feeds, and on the outside of the nest of which the eggs are deposited. Also Anomalon Vesparum, *Curt.*, reared from the comb of wasps' nests: some of the insects did not appear till the end of three years, as stated at a previous Meeting of the Society by Mr. Stone. Also specimens of various galls and their makers, or the parasites by which the makers were destroyed: amongst these was a beautiful white cottony mass, found on the ground-ivy, from which a small adscitory ichneumon had been produced; also two Cecidomyia galls and their makers. Various illustrations of the nests of insects made in the pith of bramble and elder twigs were exhibited, with the insects reared from them, including several species of sawflies, three species of Crabronidæ, one Odynerus, together with species of Malachius, Dasytes and Anaspis. Two beautiful varieties of Acronycta Alni were also contained in the box—one taken at sugar, recorded in the 'Entomologist's Intelligencer' for 1856, and one bred on the 22nd of February, 1862, the larva having fed on whitethorn and alder.

The President said he had bred Anomalon Vesparum from Vespa rufa, but he understood that Mr. Stone's specimens were bred from Vespa vulgaris; and it thus appeared that the same parasite attacked two different species of wasp.

Referring to Mr. Newman's exhibition, at the April Meeting of the Society, of a pseudogynous specimen of Liparis dispar, Professor Westwood remarked that he thought Mr. Newman's statement, that the antennæ were those of a male, was not strictly accurate; the antennæ were in fact intermediate between those of the male and female. Neither was the specimen exhibited by Mr. Newman unique, for the Berlin Museum possessed a pseudogynous specimen of Liparis dispar, which had been described and figured some years ago by Dr. Klug, and the figure had since been reproduced in several works published in this country.

Mr. F. Moore exhibited the cocoon of a new species of silkworm from Japan, probably allied to Bombyx Paphia; the silk was of a delicate pale green colour.

Mr. Lubbock exhibited the preparatory state of Psocus; the whole body of the larva was covered with hairs having terminal bulbs, which retained the grains of sand and other materials with which the creature came in contact, and this, coupled with its greenish colour, made it very difficult to distinguish from the trees on the bark of which it lived, and thus formed a protection from destruction. So completely was the body covered with these hairs that even the immediate neighbourhood of the eyes was not free from them; the consequence was that a quantity of foreign matter collected on and over the eye; and thus the singular result was attained, that an animal having very complicated eyes was at the same time provided with a complicated system to prevent it from seeing.

Mr. Pascoe stated that the Ceutorhyncus biguttatus, *Schön. Gen. et Spec. Curcul.* viii. pars 2da, p. 158, was identical with the C. raphaelensis, *Chev.*

Reverting to the subject of "dimorphism" discussed at the previous Meeting, Mr. Pascoe said that, in the opinion of Mr. Bates, neuter ants were only dimorphous females. Mr. Baly thought that every species of Sagra had a dimorphous female. The President said that he had in some cases found two forms of worker ants, which would make four forms instead of three. Mr. Lubbock would be glad to know precisely what was meant by dimorphism: no one denied that in certain orders of insects there were developed females and undeveloped females, or neuters or workers: was "dimorphism" anything more than a new name applied to an old-established fact?

Mr. Stevens exhibited a new species of Eudicella from Ovampo Land (South-Western Africa), and the nest of a trap-door spider (Actinopus) from Affghanistan.

Sir John Hearsey exhibited a collection of Noctuidæ and other Lepidoptera from India, and remarked upon the apparent identity of some of them with British species. Amongst them were specimens of Deiopeia pulchella, exactly similar to British specimens. Sir John said that that species was common in India: he remembered introducing from England the seeds of a plant never before taken to India; as soon as the plants grew up they were attacked by the larva of this moth, and he bred (he thought) as many as 500 specimens of the perfect insect.

Mr. Waterhouse exhibited a series of the British species of the genus Tychius, in illustration of the paper mentioned below.

Papers read.

Mr. Lubbock read a paper "On the Larva and Pupa of Lonchoptera." It contained an elaborate description of the dipterous larva of which Mr. Lubbock had exhibited a drawing at the February Meeting of the Society. Since that time he had obtained more specimens of the larva and the pupa, which also was minutely described. From two of the pupæ there had emerged two specimens of a species of Lonchoptera, probably L. lutea.

With reference to the description of the pupa, Prof. Westwood remarked that he could not understand a dipterous pupa without traces of the limbs lying on the breast. Mr. Lubbock's observations were full of interest, and he trusted they would be continued.

Mr. Waterhouse read "Descriptions of the British Species of the Genus Tychius." The number of species described was eleven, being two more than were enumerated in Mr. Walton's Catalogue; of these two, one had, by British coleopterists, been confounded with T. Schneideri, and the other (T. brevicornis of the paper) was apparently undescribed. A brief abstract of the characters of the less clearly distinguished species was thus furnished by the author:—

1. *T. hæmatocephalus*, Schönh. Of this insect only two supposed British specimens appear to be known—one in Kirby's collection, which was received from Mr. Spence; the other in the collection of Mr. Wollaston, to whom it was given, with other small Coleoptera, as having been taken in the Isle of Wight.

2. *T. 5-punctatus*, Linn.

3. *T. polylineatus*, Germ., Schönh. This insect is also described by Schönherr, in his 'Supplement' (vol. vii. p. 311), as T. lineatulus, *Kirby*, from English specimens sent by Mr. Walton; but the somewhat obtuse tooth of the hinder femora is overlooked, and I have no doubt that T. lineatulus and T. polylineatus will be found identical. With regard to the name lineatulus, as applied to different species of

Tychius, there is evidently great confusion. The following abstract from my notes I think will be found correct:—

T. lineatulus of Schönh. (not of Kirby) = T. polylineatus, *Germ.*, *Schönh.*

T. lineatulus of Kirby's MSS. and collection = T. Schneideri, *Schönh.*

T. lineatulus of Stephens' 'Illustrations' = T. Schneideri (part) and Miccotrogus picirostris (part).

T. lineatulus of Stephens' collection = T. polylineatus (part) and Miccotrogus picirostris (part).

T. lineatulus of Germar = T. nigrirostris of Walton's Catalogue, and perhaps also the T. tibialis, *Schönh.*

The T. polylineatus of Schönh., in our collections, is generally, if not always, labelled "Schneideri," and is sometimes mixed with the true T. Schneideri. The name lineatulus is given as synonymous with Schneideri both in Walton's Catalogue and that of Dr. Schaum.

4. *T. venustus*, Fab.

5. *T. Kirbii* (T. flavicollis, *var. β.*, *Schönh.*; T. flavicollis, *Walton*, in the British Museum Collection, not of Kirby nor Stephens). Oblong-ovate, pitchy, densely clothed with broad ochraceous scales, those on the under parts and on the suture of the elytra whitish; rostrum, antennæ and legs testaceous; thorax rounded and contracted in front, the sides behind the middle line very nearly straight and parallel; elytra ample, with the humeral angles somewhat prominent, distinctly striated as seen denuded of the scales, and of a rufous colour, excepting at the base; rostrum long, nearly straight and cylindrical; posterior femora dentate in both sexes. Considerably smaller than T. venustus, which it most nearly approaches in form, and distinctly larger than either of the following species.

The above species all have some at least of the femora dentate: the following species have unarmed femora.

6. *T. junceus*, Germ., Schönh. Oblong-ovate, pitchy (the elytra posteriorly more or less red), densely clothed with elongate yellowish scales; rostrum distinctly arched, gradually attenuated from the base to the point of insertion of the antennæ, then rather more distinctly attenuated and somewhat pointed, especially in the males; antennæ, legs and the greater part of the rostrum testaceous; thorax with the sides distinctly rounded; elytra striato-punctate. General form shorter and more inclined to ovate than the following species. Schönherr's description of T. flavicollis, as it appears to me, belongs almost entirely to this species.

7. *T. tomentosus*, Germ., Schönh. Oblong, pitchy black (the apex of the elytra more or less rufescent), above clothed pretty densely with elongate pale yellowish scales, with filiform scales on the striæ of the elytra, and a few broad white scales on the suture; rostrum stout, very little bent, and of very nearly uniform width throughout; the apex only rufescent; sides of the thorax very little rounded; elytra distinctly striated; antennæ and legs testaceous; the femora more or less clouded with dusky, rarely entirely dark. More elongate than the preceding species, and is readily distinguished by its rostrum being stouter (the greater part dark coloured), less bent and having the apex not attenuated. The scales on the elytra are, moreover, of three distinct forms, whereas in T. junceus there is scarcely a perceptible difference in any of the scales. In the preceding species the anterior tibiæ are unarmed in either sex: in the following four species the anterior tibiæ of the males have a tooth or spine on the middle of the inner side.

8. *T. Schneideri* (Herbst), Schönh. Oblong, rather broad and but moderately convex; pitchy black; above pretty densely clothed with piliform, and for the most part ash-coloured scales, with broader white scales along the middle of the thorax, most abundant behind, and with broad snow-white scales on the suture of the elytra; antennæ at the base, tibiæ and tarsi ferruginous; rostrum thickish, bent and cylindrical; femora but little incrassated. The alternate interstices of the striæ of the elytra are often paler (sometimes whitish) than the others. The tooth on the anterior tibiæ of the male is but little prominent, smaller, shorter and less convex than T. polylineatus; general hue darker, being of a plumbeous gray; the scales much narrower, and furthermore distinguished by the unarmed femora and by the toothed anterior tibiæ of the male.

9. *T. Meliloti* (Kirby), Stephens, Germar, Schönh., Walton. Oblong, pitchy black (the apex of the elytra often rufescent), above clothed with yellowish elongated scales; rostrum arched, attenuated, and the part anterior to the antennæ somewhat depressed; antennæ, tibiæ and tarsi, as well as the apex of the rostrum testaceous; thorax constricted in front; the sides nearly parallel; elytra distinctly striated, and with the humeral angles rather prominent; legs, comparatively, rather slender; the anterior tibiæ with an acute tooth on the inner side, in the male sex. About equal in size to T. tomentosus and Miccotrogus picirostris, but a little broader than the last-mentioned insect.

10. *T. nigrirostris*, Walton Catal. (*T. tibialis*, Schönh.?). Oblong, black, rather sparingly clothed with subpiliform ashy white scales; the scape and first joint of the funiculus of the antennæ, the tarsi and apical portion of the tibiæ rufo-testaceous; rostrum rather slender, linear and but little arched; elytra distinctly striated. Male with an acute tooth on the inner side of the anterior tibiæ. Of the very narrow scales on the elytra of the insect there are usually but two rows on the interstices of the striæ, and viewed under an ordinary lens the elytra appear to have whitish striæ; on the striæ themselves is a single row of still more slender scales; the posterior margin of the thorax is edged with broader white scales, and similar scales are scattered along the suture. In size, form and general appearance extremely like Miccotrogus picirostris. Schönherr's description of T. tibialis agrees very closely with this insect, but no mention is made of the dentate tibiæ of the male; possibly he only possessed the female.

11. *T. brevicornis* (N. SP.). Minute; oblong, black, rather sparingly clothed with very narrow scales as in the preceding species; the base of the antennæ (including the scape and two of the joints of the funiculus), the tibiæ and tarsi rufo-testaceous; the third joint of the funiculus slightly transverse, the others gradually broader, though scarcely longer, the last joints very strongly transverse. Anterior tibiæ (in the male?) with an obtuse tooth on the inner side. About half the bulk of the medium-sized specimens of Tychius picirostris. Most closely resembles the preceding species, from which it can scarcely be said to differ, excepting in its very small size, and the comparatively short antennæ; the scape is relatively shorter and more clavate; and the separate joints of the funiculus are decidedly shorter when corresponding joints are compared. I have seen but three specimens of this insect; one specimen I found at Hawkhurst, in Kent, in the month of April, 1860; a second I took at Gravesend, in the following year, in the month of May; and the third is in Mr. S. Stevens' collection: they all have an obtuse tooth on the inner side of the anterior tibiæ.—*J. W. D.*

CONTENTS.

Quadrupeds.—Concerning a Dormouse, *Capt. Henry Hadfield*, 8025.

Birds.—Early Arrival of Migratory Birds, *A. G. More, Esq., F.L.S.*, 8026. Protection of Small Birds, 8027. Birds Killed by flying against a Clock, *John James Fox, Esq.*, 8028. The Nightingale's Nest, *Rev. Alfred Charles Smith, M.A.*, 8029. Occurrence of the Golden Oriole in Essex, *C. R. Bree, Esq., M.D., F.L.S.*, 8032. Occurrence of the Black Redstart at Southampton, *J. Goatley, Esq.*, 8032. Occurrence of the Lapland Bunting in Norfolk, *H. Stevenson, Esq.*, 8032. Occurrence of the Parrot Crossbill near Colchester, *C. R. Bree, Esq., M.D., F.L.S.*, 8032. Of the change of Plumage in the Crossbills and Pine Grosbeak, *Capt. Henry Hadfield*, 8033. Occurrence of the Black Redstart in the County of Dublin, *H. Blake-Knox, Esq.*, 8034. Occurrence of the Hoopoe in Essex, *C. R. Bree, Esq , M.D., F.L.S.*, 8034. First Appearance of the Cuckoo, 8034; Appearance of the Swallow in 1862, *J. Ranson, Esq.*, 8035. Singular Instance of Nidification of the Woodpigeon, *A. Dobrée, Esq.*, 8035. Occurrence of the Squacco Heron near Redruth, *Edward Hearle Rodd, Esq.*, 8035. Note on Sabine's Snipe, *John Gatcombe, Esq.*, 8035. The Common Bittern in Norfolk, *H. Stevenson, Esq.*, 8035. Occurrence of the Iceland Gull at Plymouth, *John Gatcombe, Esq.*, 8036. Dates of Appearance and Song of a few of our Migratory Birds near Penzance, *Edward Hearle Rodd, Esq.*, 8037.

Reptiles.—Conclusion of the History of the Incubation of the Python, *E. W. H. Holdsworth, Esq., F.L.S.*, 8037.

Arachnida.—Sketch of an Arachnological Tour in Scotland in 1861, with a List of Scotch Spiders, *Rev. O. Pickard-Cambridge, M.A.*, 8041.

On the Use of Glycerine for Preserving Shells, *F. Archer, Esq.*, 8051.

Insects.—Occurrence of Deilephila lineata at Deal, *H. J. Harding*, 8051. Capture of Deilephila lineata and Heliothis peltigera near Plymouth, *J. J. Reading, Esq.*, 8051. Capture of Deilephila lineata at Colchester, *C. R. Bree, Esq., M.D., F.L.S.*, 8052. Eupithecia arceuthata and E. helveticata—are they distinct? *Rev. H. Harpur Crewe, M.A.*, 8052. Capture of Stauropus Fagi at Henley-on-Thames, *H. Stubbs, Esq.*, 8052. Agrotis suffusa taken at Sugar in April, *H. Bartlett, Esq.*, 8052. Will 1862 pass over without an Entomological Intelligencer? *R. Anderson, Esq.*, 8053. A Review of the Genus Ptinella, *Rev. A. Matthews, M.A.*, 8053.

Proceedings of Societies.—Entomological Society, 8060.

SUCCESSOR TO THE 'INTELLIGENCER.'

IT is understood that a general desire exists among the entomologists who so largely profited by and enjoyed Mr. Stainton's 'Intelligencer' to see a successor to that excellent paper. The Bowdon and Altrincham Entomological Society have therefore resolved to attempt to supply this want. The Members have felt great reluctance in coming forward so prominently as is involved in such an enterprise, but have been impelled, by their anxiety to have a Substitute for the deceased journal, to hazard a trial. They have already secured the co-operation of several of the most distinguished entomologists, a list of whom, with their permission, will be published shortly.

It is hoped that all will clearly understand that the publication depends entirely on the support with which the editors are furnished. None can fail to be sensible of the desirability of carrying out the proposed scheme, but it is evident from all sources who are capable of giving an opinion that without the earnest co-operation of all entomologists success cannot even be hoped for.

Unless a sufficient number of subscribers be found the project must imperatively fall to the ground.

The numbers will be issued weekly, price 2*d*. (post 3*d*). All who are willing to subscribe quarterly for a number by post will please to communicate with one of the editors at once.

All letters to be addressed to "Messrs. J. B. & P. BLACKBURN, Bowdon, Cheshire," or "Mr. STANLEY LEIGH, Altrincham, Cheshire."

This day is published, post 8vo, with a photographic portrait, price 7s. 6d.

MEMOIR of the REV. J. S. HENSLOW, M.A., F.L.S., F.G.S., F.C.P.S., Rector of Hitcham and Professor of Botany in the University of Cambridge. By the Rev. LEONARD JENYNS, M.A., F.L.S., F.G.S., F.C.P.S.

John Van Voorst, 1, Paternoster Row.

Printed by E. Newman, 9, Devonshire Street, Bishopsgate Street, N.E.